

S  
363.006  
L11V  
1966

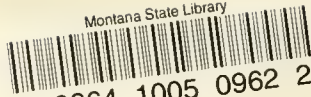
SEP 10 1975  
STATE DOCUMENTS  
STANFORD  
LIBRARY

STATE OF MONTANA

ANNUAL REPORT  
of the  
STATE VETERINARY SURGEON  
to the  
LIVESTOCK SANITARY BOARD  
July 1, 1965 through June 30, 1966

STANFORD UNIVERSITY  
WITHDRAWN

Montana State Library



3 0864 1005 0962 2

# TABLE OF CONTENTS

I. <u>INTRODUCTION</u>	PAGE
A. Letter of Transmittal from the Montana Livestock Sanitary Board to the Governor of the State of Montana.....	i
B. Letter of Transmittal from the State Veterinary Surgeon to the Montana Livestock Sanitary Board.....	ii
C. Members of the Montana Livestock Sanitary Board.....	iii
D. Divisions of the Montana Livestock Sanitary Board.....	iv
E. History & Duties of the Montana Livestock Sanitary Board.....	v
II. <u>DIVISION REPORTS</u>	
A. ADMINISTRATION DIVISION REPORT	
1. Summary of Purpose and Objectives.....	1
2. Livestock Sanitary Board Staff.....	1
3. Diagnostic Laboratory Division.....	2
4. Disease Control Division.....	3
5. Milk & Dairy Inspection Division.....	7
6. Meat Inspection Division.....	7
7. Artificial Insemination.....	8
8. Grant to the Veterinary Research Laboratory.....	8
9. Official Regulations.....	10
10. Official Orders.....	10
11. Licenses and Permits Issued.....	11
12. Cooperating Agencies, Departments and Associations.....	12
13. Summary of Official Inspections and Official Tests.....	13
14. Financial Statement.....	14
B. DIAGNOSTIC LABORATORY DIVISION REPORT	
1. Summary of Work Performed.....	15
2. Bacteriology, Pathology, Parasitology and Virology Report.....	16

# Table of Contents

---

(Continued)	PAGE
3. Serology Report.....	30
4. Milk, Cream and Cottage Cheese Bacteriology Report.....	31
5. Chemical Report.....	32
6. Autopsies Performed Report.....	34
7. Distribution of Laboratory Tests Among Species of Animals Report.....	35
C. DISEASE CONTROL DIVISION REPORT	
1. Cattle Diseases.....	36
2. Horse Diseases.....	40
3. Sheep Diseases.....	41
4. Swine Diseases.....	42
5. Poultry Diseases.....	43
6. Wild Animal Diseases.....	43
7. Official Animal Inspections Report.....	44
8. Montana Veterinarians' Disease Report.....	45
9. Etiological Agents Responsible for Diseases Reported by Montana Veterinarians.....	48
10. Imports into Montana.....	49
11. Out-of-State Breeders Holding Permits to Import Semen for Artificial Insemination.....	50
12. Out-of-State Hatcherymen Holding Permits to Import Baby Chicks and Hatching Eggs.....	50
13. Official Inspections Made at Montana Livestock Markets.....	51
14. Garbage Feeding Establishments.....	51
D. MILK & DAIRY INSPECTION DIVISION REPORT	
1. Summary of Work Performed.....	52
2. Official Inspections and Tests of Milk, Milk Products, Dairies and Milk Plants.....	52

(Continued)

PAGE

3. Milk Plant Sanitation Compliance Ratings with  
Montana Livestock Sanitary Board Regulations..... 53
4. Retail Raw Dairies Sanitation Compliance Ratings with  
Montana Livestock Sanitary Board Regulations..... 54

E. MEAT INSPECTION DIVISION REPORT

1. Summary of Work Performed..... 55
2. Official Establishment Inspections..... 55
3. Labels and Sketches..... 55
4. Establishments under State Meat Inspection..... 56
5. Establishments under Federal Meat Inspection..... 56
6. Animals Slaughtered under State and Federal Meat Inspection and  
Animals Slaughtered without Meat Inspection..... 57
7. Whole Carcasses Found Unfit for Human Consumption under  
State and Federal Meat Inspection..... 57
8. Parts of Carcasses Found Unfit for Human Consumption under  
State and Federal Meat Inspection..... 57
9. Beef and Swine Livers Found Unfit for Human Consumption under  
State and Federal Meat Inspection..... 57
10. Diagnoses of Whole Carcasses Condemned at Slaughter under  
State Meat Inspection..... 58
11. Diagnoses of Parts of Carcasses Condemned at Slaughter under  
State Meat Inspection..... 59
12. Diagnoses of Beef Livers Condemned at Slaughter under  
State Meat Inspection..... 59
13. Pounds of Meat and/or Meat By-Products Processed under  
State Meat Inspection..... 60
14. Reinspected or Rejected Meat, Meat By-Products and Ingredients  
under State Meat Inspection..... 60

III. INDEX..... 61

IV. TABULATION REPORTS..... 72

STATE OF MONTANA  
LIVESTOCK SANITARY BOARD  
Helena, Montana

July 1, 1966

The Honorable Tim Babcock  
Governor of the State of Montana  
Helena, Montana

Dear Governor Babcock:

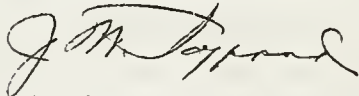
In compliance with Title 46, Section 242, R.C.M. 1947, we are transmitting to you the "Annual Report of the State Veterinary Surgeon to the Livestock Sanitary Board" for the fiscal year July 1, 1965 through June 30, 1966.

There were four meetings of the Livestock Sanitary Board during the fiscal year:

September 7, 1965..... Helena  
December 6 and 7, 1965..... Billings  
March 2, 3, 4 and 5, 1966..... Helena  
May 18, 1966..... Great Falls

The complete Minutes of all the above meetings are recorded in the "Official Minute Book of the Montana Livestock Sanitary Board" and are on file in the Office of the State Veterinary Surgeon, Livestock Building, Capitol Grounds, Helena, Montana.

Respectfully submitted,



J. W. SAFFORD, D.V.M.  
Executive Officer  
MONTANA LIVESTOCK SANITARY BOARD

STATE OF MONTANA  
LIVESTOCK SANITARY BOARD  
Helena, Montana

July 1, 1966

The Honorable Livestock Sanitary Board  
Helena, Montana

Dear Sirs:

In compliance with Title 46, Section 242, R.C.M. 1947, I submit to you the  
'Annual Report of the State Veterinary Surgeon to the Livestock Sanitary Board'  
for the fiscal year July 1, 1965 through June 30, 1966.

Respectfully submitted,



J. W. SAFFORD  
State Veterinary Surgeon  
STATE OF MONTANA

MEMBERS  
of the  
MONTANA LIVESTOCK SANITARY BOARD

MR. ARCHIE O. WILSON, President..... Hysham  
MR. JOHN W. BLACK, Vice President..... Hinsdale  
MR. MELVIN PETERSON..... Wisdom  
MR. MANLY A. MOORE..... Powderville  
MR. F. T. SAYLOR..... Choteau  
MR. WILFORD JOHNSON..... Hall

J. W. SAFFORD, D.V.M.

Executive Officer



MEMBERS  
of the  
MONTANA LIVESTOCK SANITARY BOARD

MR. ARCHIE O. WILSON, President..... Hysham  
MR. JOHN W. BLACK, Vice President..... Hinsdale  
MR. MELVIN PETERSON..... Wisdom  
MR. MANLY A. MOORE..... Powderville  
MR. F. T. SAYLOR..... Choteau  
MR. WILFORD JOHNSON..... Hall

J. W. SAFFORD, D.V.M.  
Executive Officer

DIVISIONS  
of the  
MONTANA LIVESTOCK SANITARY BOARD

ADMINISTRATION..... J. W. Safford, D.V.M.  
DIAGNOSTIC LABORATORY..... Beckwith Hubbell, Jr., D.V.M.  
DISEASE CONTROL..... Glenn C. Halver, D.V.M.  
MILK & DAIRY INSPECTION..... Herb Ballou, M.S.  
MEAT INSPECTION..... Herb Brosz, D.V.M.

HISTORY & DUTIES  
of the  
MONTANA LIVESTOCK SANITARY BOARD

The Livestock Sanitary Board was created by Chapter 152 of the 1907 Laws of Montana and re-enacted by Chapter 262 of the 1921 Laws of Montana.

The duties of the Livestock Sanitary Board are set out in Sections 46-208 through 46-246; 46-301 through 46-303; 46-401 through 46-415; 46-907; 46-2401 through 46-2406; 46-2501 through 46-2515 and 46-2601 through 46-2611, R.C.M. 1947.

It is the duty of the Livestock Sanitary Board to confine, eradicate, control or prevent diseases of livestock and poultry; to prevent the introduction of livestock and poultry diseases into the State of Montana; to maintain a Diagnostic Laboratory; to license and to establish and maintain a system of inspection of meat and meat plants, slaughterhouses, dairies, milk and milk plants, rendering plants, garbage-feeding and garbage cooking establishments and animal artificial Insemination. In addition, it is the duty of the Livestock Sanitary Board to obtain samples of meat and milk offered for human consumption and carry out bacteriological and chemical analyses of these samples; to provide for safety of manufactured or refined foods for livestock; and to provide for the control and safety of remedies and biological products used for treatment of animals.

### SUMMARY OF PURPOSE AND OBJECTIVES

Montana, with its nearly 3,000,000 cattle, 1,600,000 sheep, 200,000 swine, 2,000,000 poultry, 100,000 horses and other animals, contributes much to providing precious food and fiber to a nation with a rapidly expanding population. The combined livestock and poultry industries, with their dependent allied industries, are essential to the economic stability of our state. During this recent era of food surpluses, which appears to be coming rapidly to a close, too many have had a tendency to take our blessings of adequate, wholesome food and fiber and a healthy, prosperous livestock and poultry industry for granted. The Montana Livestock Sanitary Board and its staff, whose assigned duty and responsibility it is to safeguard the health of this extremely important industry, do not take this for granted.

They know, all too well, that livestock diseases can, if permitted, decimate a livestock and poultry industry. They know that starvation, economic misery and political unrest in many countries today is the result of failing to recognize a healthy livestock population as the foundation of socio-economic stability. It has been the purpose of the Livestock Sanitary Board staff and Montana veterinarians, all of whom carry Deputy State Veterinarian appointments, to carry out every safeguard possible to protect the livestock and poultry industry from disease and to assure many people continued, adequate amounts of safe, wholesome food and fiber. To this, they are dedicated. It is hoped this Annual Report will properly reflect their combined efforts to accomplish these important objectives.

### LIVESTOCK SANITARY BOARD STAFF

The demand of government and industry for veterinary medical scientists continues to increase. The 18 Colleges of Veterinary Medicine have not been able, and will not be able in the foreseeable future, to graduate sufficient numbers of veterinary medical scientists to meet this demand.

It is most difficult for the Montana Livestock Sanitary Board to attract and maintain the scientific, professional staff it must have in order to provide adequate safeguards for a healthy livestock industry and assure a safe product to Montana meat and milk consumers, when professional salaries are at least 15% to 30% lower than those offered by competing government agencies, industry and private practice. The result has been that key positions have been vacant on the staff somewhere in the organization for 10 years. At the close of the fiscal year, two District Deputy State Veterinarian positions and one Veterinary Meat Inspector position were vacant. With only 6 District Deputy State Veterinarian positions on the entire state field-staff, vacancy of 1/3 of these positions is dangerous. The organizational structure of the Livestock Sanitary Board is established and maintained to have a minimum of trained, competent District Deputy State Veterinarians capable - at a moments notice - to recognize and establish emergency disease control measures. This is an absolute essential to the safety of the industry. The inability to attract competent veterinarians to a career in state public service, resulting in a reduction by 1/3 of a minimum staff, is a risk the industry and Montana should not have to take. This same situation exists with scientific personnel required in the laboratory, in meat inspection and in milk inspection work.

Montana's livestock industry and food-producing capabilities are too precious to the state and nation to risk by not having the safeguard of competent veterinary medical scientists readily available on the Montana Livestock Sanitary Board staff.

The valuable work that has been accomplished has been done by a dedicated few who have tried very hard to do their own work and also carry the additional load created by vacancies on the staff. They simply would not be able to stretch their dedication and willingness to work, should we be faced with only a "small" emergency disease outbreak which can happen at any time.

The accomplishments of these dedicated men and women this past fiscal year are presented to the Montana Livestock Sanitary Board with most sincere gratitude.

### DIAGNOSTIC LABORATORY DIVISION

The Diagnostic Laboratory and its work is essential to the operation of all Divisions in the Livestock Sanitary Board. The Disease Control Division could not carry out its functions without the assistance of accurate laboratory findings. The Milk and Dairy Inspection Division could not assure the people of Montana a safe, wholesome fluid-milk supply without the assistance of thousands of routine milk tests. The Meat Inspection Division could not assure the people of Montana a safe, wholesome meat supply without laboratory assistance in the diagnosis of livestock diseases and the testing of meat products to determine their labeled content.

Modern technological advances require that a laboratory have proper equipment, facilities and a properly trained staff. The Livestock Sanitary Board is to be commended for their efforts to maintain as good a state diagnostic laboratory as can be found anywhere.

The review of the livestock diseases present in Montana emphasizes the great need for improving the capability of the laboratory in the diagnosis of virus diseases. It is recommended that additional personnel, trained in virus diagnostic techniques, be added to the staff and the necessary laboratory equipment be obtained to meet this important demand.

In 1965 the Montana Horse Racing Commission requested the Montana Livestock Sanitary Board to determine if the Diagnostic Laboratory could run drug-detection tests on race horses, thus avoiding to have the tests made in an out-of-state laboratory. Due to the lack of some laboratory equipment and personnel trained to perform the tests, the Board determined that the laboratory was unable to perform the tests in the 1965/66 racing season. Trained personnel were available the following year and necessary equipment was obtained. The chemistry laboratory section of the Diagnostic Laboratory started to perform the tests in June, 1966. The Montana Horse Racing Commission arranged payment for the running of the tests from the race tracks submitting the samples. The cost of the equipment and running of the tests will be amortized from the fees charged. This not only assists another state agency, by using an available laboratory in Montana, but provides equipment that increases the capability of the laboratory to make toxicological examinations. It also helps provide an additional chemist who will be needed to



perform the required gas chromatography analyses of meat and milk. Capital item funds became available at the end of the fiscal year to purchase the required gas chromatograph to detect pesticides in meat and milk.

A review of the work performed by the Diagnostic Laboratory Division reveals ever-increasing demands for their exacting scientific work. There is every indication that these demands will continue to increase.

#### DISEASE CONTROL DIVISION

The reports of the Diagnostic Laboratory Division, the Disease Control Division and the Meat Inspection Division combined will reflect the over-all animal disease picture in Montana for the fiscal year. An analysis of the livestock and poultry disease reports indicates that the health of Montana livestock has never been better. There was an absence, during the fiscal year, of outbreaks of such diseases as anthrax, bluetongue, hog cholera, Newcastle disease and scabies which have, in the past, required extraordinary control procedures. Previous costly diseases, such as brucellosis, tuberculosis and pullorum are at a very low level.

Even though the livestock health record is good, there is always the "smoke and flames" of diseases that must be suppressed before they become conflagrations. In addition to the detailed reports of livestock diseases contained elsewhere in this report, it is believed the following diseases merit the continued attention of the Livestock Sanitary Board

#### Brucellosis

Progress was made during the fiscal year to eradicate brucellosis. More cattle were tested at slaughter, through continued improvement of the market-cattle-testing program which is proving to be a tremendous asset in county recertification and early detection of newly infected herds. Cattle infection rate of 0.311% and herd infection rate of 0.119% at the end of the fiscal year were the lowest ever recorded. Thirty-eight counties, at the end of the fiscal year, had no known infected herds - an increase of one county. No case of human brucellosis was reported.

Even though progress has been made, many problems arise in attempts to effect final eradication. The greatest problem is general apathy. As a disease that once caused great economic loss and public health danger is reduced to a point where there is no over-all economic loss or public health danger, then the stimulus to persist in efforts for final eradication is greatly reduced. This must not happen. If the last persistent effort is not made, there is sufficient foci of infection remaining to reestablish brucellosis.

#### Encephalitis

The number of cases of Western Equine Encephalitis in August and September of 1965 was the highest recorded since the pandemic in 1938. This indicated a similarity of increase of incidence which preceded the 1938 pandemic. Increased mosquito activity in 1965 and a susceptible horse population were probably two factors contributing to the outbreak.

Every effort was made to encourage horse owners to vaccinate their horses prior to the 1966 season and to carry out mosquito control in and around poultry premises.

It would appear that response to these efforts has been good, leading us to believe there will not be a repetition of the number of cases in 1966 as occurred in 1965.

#### Epididymitis

It was definitely established during the fiscal year that ram epididymitis is widespread in Montana and is causing quite serious economic loss in flocks having the disease.

In December, 1965 a committee of the Montana Woolgrowers Association met with the Livestock Sanitary Board to explore ways and means to control the disease. Following the meeting, members of the Livestock Sanitary Board and Montana Veterinary Research Laboratory staff assembled all available information on ram epididymitis for review with the Montana Woolgrowers committee. As the result of this study, the Montana Livestock Sanitary Board, in March, 1966, adopted regulations to provide for official vaccination of rams with REO bacterin and revised Regulation 1521, requiring specific clinical examination for ram epididymitis of rams to be imported into Montana. They also made recommendations for vaccination of breeding rams and recommendations for inspection and rejection of rams with epididymitis being offered for sale at public markets.

It is recommended that the Board, with the cooperation of the Montana Woolgrowers Association, continue to observe and study ram epididymitis in order to implement any action which will become necessary to assist in the control of this disease.

#### Fluorosis

Again this fiscal year, reports were received of cattle showing clinical signs of fluorosis. Again, all cases were located within a 15 mile radius of Garrison.

It seems strange, in this era of technological advancement, that an industry would continue to throw out materials into the environment which affects the health of animals of the most basic and important industry in our state. It is recommended that the Livestock Sanitary Board continue its efforts to seek appropriate measures that would prevent the indiscriminate discharge of poisons. This can be done in such a way that both industries could exist side by side.

#### Hog Cholera

Culminating about 40 years of effort, hog cholera has been eradicated from Montana. This fact was recognized in February, 1966, by the presentation to Governor Babcock from the United States Department of Agriculture of a plaque declaring Montana a hog cholera-free state. Being free of hog cholera will mean much to Montana swine producers. It will be a little additional measure to assist in providing adequate food to an expanding population.

It will be most worthwhile to maintain this freedom from hog cholera. It is recommended that continued all-out efforts be made to prevent a reintroduction. It is recommended that should hog cholera reappear in Montana, immediate action be

taken to confine the disease and properly dispose of all infected and exposed swine. This should be followed by careful, supervised cleaning and disinfection of premises and contaminated equipment before restocking. To effect such procedure, it is recommended that funds always be available to indemnify owners of swine that are ordered destroyed. Such action will assure continued freedom from hog cholera.

### Rabies

This dreadful disease, during the fiscal year, posed a very real threat to livestock and human health. The disease has made its entry into Montana in the skunk population in eastern Montana. It is apparent that skunk rabies has been gradually spreading westward over a number of years.

Fifteen laboratory-confirmed rabid skunks from December, 1965 through May, 1966 established the seriousness of the threat.

It seems inconceivable that Montana, for the first time in history, should have to live in fear of rabies endemic in its animal population. Definite steps were taken to establish an all-out-effort to carry out an intensified skunk-suppression rabies-eradication program in eastern Montana. The objectives were to halt the western migration of skunk rabies and to eliminate all foci of infection in the skunk population.

The cooperation of Montana County Commissioners, U. S. Bureau of Sport Fisheries and Wildlife, Montana Fish & Game Commission, Montana State Board of Health, Montana Livestock Commission, Montana Cooperative Extension Service and the office of the Governor was solicited and willingly obtained. A committee, consisting of representatives of the Montana Livestock Sanitary Board, Montana Fish & Game Commission, U. S. Bureau of Sport Fisheries and Wildlife, Montana Livestock Commission, Montana State Board of Health and Montana Cooperative Extension Service, investigated proposed procedures for a skunk-suppression rabies-eradication program. The cooperative inter-agency recommended program was activated.

The willing cooperation of each of the above agencies for the common good of the people of Montana, lending their special talents and assistance, portends well that the program will be successful.

### Scabies

In December, 1965, it was reported that Montana cattle were in a feedlot at Somis, California, containing about 10,400 head of cattle found to be infected with Psoroptic scabies. The feedlot contained 581 head of Montana cattle, consigned in 9 shipments. It was impossible to determine the origin of the outbreak and Montana cattle were suspect.

It was determined that the Montana cattle originated from 151 ranches located in 27 counties. It was imperative to maintain the health status of Montana's cattle industry and inspect the herds of origin of all the cattle in the feedlot. A total of 32,192 cattle was inspected and, where necessary, skin scrapings were submitted for laboratory examination. All cattle and laboratory examinations were negative, thus, again, avoiding a costly eradication program and an embargo against Montana cattle.



### Tuberculosis

Tuberculosis in chickens, caused by Mycobacterium avium, results in unprofitable poultry production. Even though good poultry husbandry and management practices can eliminate tuberculosis from poultry flocks, altogether too many flocks have tuberculosis in Montana.

Swine tuberculosis almost always finds its origin from infected chickens. This results in large numbers of parts of swine, and even total carcasses, being condemned on meat inspection.

Avian tuberculosis also results in sensitizing cattle to the tuberculin test and producing small mesenteric lesions in cattle. This greatly interferes with and complicates bovine tuberculosis eradication efforts.

It is recommended that the Montana Livestock Sanitary Board give serious consideration to the adoption and enforcement of regulations that will effect the elimination of tuberculosis from Montana poultry flocks.

### Vibriosis

Vibriosis in cattle in recent years posed a serious threat to economical production of beef cattle. The Trivalent Vibrio fetus bacterin developed by the Montana Veterinary Research Laboratory and extensively field-tested by the Ray Foundation of Montana was produced commercially and became available to the industry during the first part of 1966.

The bacterin, from field-test results, promises to provide a means to control and prevent vibriosis.

### Distribution of Causes of Animal Diseases

We wish to call particular attention to the distribution of animal diseases reported during the fiscal year and to their causes, as shown in the Disease Control Division Report. (Page 48)

Virus-caused diseases were responsible for over 50% of diseases reported in cattle. It clearly indicates that these are serious disease threats and will have to be handled in the future. Such diseases as shipping fever, rhinotracheitis, enzootic bovine abortion, mucosal-virus diarrhea, vulvovaginitis, rabies, encephalitis, bluetongue, transmissible gastroenteritis and others predominate the disease picture in livestock today. More research, increased diagnostic capability, effective immunizing agents and increased knowledge of the behavior of the diseases will have to be obtained to effectively deal with many of them. We recommend more emphasis be placed on the cause and control of the increasing viral diseases.

Diseases caused by internal and external parasites, this past fiscal year, were responsible for 81% of the sheep disease problems reported. External parasites, such as lice and sheep keds, and internal parasites, such as round worms and tapeworms, are primarily responsible. These parasites can be effectively controlled through application of proper management and modern treatment.

The diseases for which the causes remain unknown were particularly significant in cattle, accounting for over 17% of the diseases reported. They have been and remain costly to the industry. The diseases of "cancer eye", "pink eye", "asthma" and "water belly" take too great a toll. The hope for reduction of these diseases rests in finding the cause through research, early detection and proper treatment.

#### MILK & DAIRY INSPECTION DIVISION

Another year can be added to the many without a report of a milk-borne disease outbreak from the consumption of fluid milk. This demonstrates the effectiveness of the milk and dairy inspection work being carried out. This also demonstrates the wisdom of enforcing requirements that dairy herds be free of such diseases as brucellosis and tuberculosis.

The Montana Livestock Sanitary Board Official Regulations pertaining to "Dairies, Milk Plants, Milk and Milk Products" were revised in September, 1965, in consultation with dairy industry representatives, to conform with the requirements of the U. S. Public Health Service 1965 recommended Grade "A" Pasteurized Milk Ordinance.

Plans have been formulated and equipment provided to start routine testing of milk samples for the detection of pesticides in the fall of 1966.

Meetings with industry representatives have launched procedures for the industry to conduct Wisconsin Mastitis Tests on producer-dairy milk samples to implement the milk plant's quality-control-program and to stimulate mastitis control at the dairy farm.

#### MEAT INSPECTION DIVISION

The availability of additional funds on July 1, 1965, provided by the 39th Legislative Assembly, made it possible to establish meat processing and labeling inspection in all establishments operating under the Montana Meat Inspection Act. Meat processing and labeling inspection has long been a requirement under Montana Laws and Regulations. The funds provided enabled the Livestock Sanitary Board to meet their responsibilities assigned to them by these Laws and Regulations.

Meat processing and labeling inspection was inaugurated in 17 establishments during the fiscal year. The cooperation of the meat plants and industry has been excellent in establishing this phase of the meat inspection. All plants required to have meat inspection have done so, with the exception of 4 small meat processing establishments in Missoula. Every effort is being made to obtain their compliance before resorting to required legal action. The establishment of processing and labeling inspection required the obtaining and training of all new personnel. Excellent progress has been made.

It appears that meat inspection demands will continue to increase. Eight additional establishments were granted official meat inspection this fiscal year. It

is anticipated that at least 4 more will request meat inspection during the next fiscal year.

The report of the Meat Inspection Division, showing that 1,571,005 pounds of meat and meat products were found totally unfit for human consumption and condemned, speaks more eloquently than words to justify this public health service.

#### ARTIFICIAL INSEMINATION

In accordance with Chapter 37, Laws of 1953, 230 licenses were issued to individuals during the fiscal year to practice artificial insemination in Montana.

On behalf of the Montana Livestock Sanitary Board, the Animal and Range Sciences Department of Montana State University held two courses on artificial insemination and sanitation during the fiscal year to assist individuals in qualifying for a license. Duly appointed representatives of the Livestock Sanitary Board, who serve on the staff of Montana State University, conducted licensing examinations twice during the fiscal year to determine qualifications of license applicants.

#### GRANT TO THE VETERINARY RESEARCH LABORATORY

The Montana Livestock Sanitary Board approved a grant of \$10,000 for the fiscal year to the Montana Veterinary Research Laboratory, specifying that the entire amount was to be used to assist in establishing and carrying out a research project on "calf scours". The following progress report was submitted by the Veterinary Research Laboratory:

"NEONATAL ENTERITIS IN CALVES - PROGRESS REPORT  
Veterinary Research Laboratory  
Montana State University

The studies for the 1965-66 fiscal year were divided into three categories:

- I Isolations of bacteria from fecal specimens of newborn calves; normal and scouring calves in the same herd.
- II Effects of E. coli, C. perfringens, mixtures of bacteria, and bacterial toxins.
- III Laboratory studies on:
  - A Colostrum, amounts absorbed, antibody content.
  - B Toxigenicity and serological characteristics of isolated bacteria.
  - C Attempt to correlate resistance of calves with "A" and "B" above.

Results:

- I Many bacteria have been isolated from fecal samples of calves. Over 600 E. coli and C. perfringens isolates have been obtained and are being processed for serological characteristics. It has been observed that "normal" newborn calves contain only E. coli, while all but one of the scouring calves contained large numbers of both E. coli and C. perfringens. Types A and C. Anerobes were not isolated from a scouring calf that had received two treatments.
- II Studies on the effect of bacterial cultures or toxins are inconclusive because we have not had enough animals on the experiment. This work will be carried to completion, and the data obtained will be used to design future experiments with larger groups of calves.
- III It is much too early to arrive at any conclusions from our laboratory investigations in which we are attempting to obtain some form of correlation between the quality and quantity of ingested colostrum and resistance to challenge.

Attendance was made to the Western Regional Committee Meeting on Enteric Diseases of Newborn Calves. The Veterinary Research Laboratory is a member of this committee and participates in the annual meeting. Ten different Western Experiment Stations are investigating this problem on a regional basis. The meeting serves for the correlation and exchange of information on this subject of calf scours and to eliminate duplication of effort.

In summary, we feel that, although substantial progress has been achieved during the beginning studies and preliminary results are encouraging, much work remains to be accomplished before the causes of the disease syndrome are fully understood and the time when reliable methods of prevention, treatment and control are established."



OFFICIAL REGULATIONSRevised:

The following Official Regulations were revised and adopted during the fiscal year:

1. Chapter 1, Regulation 101 through 118. "Dairies, Milk Plants, Milk and Milk Products".
2. Regulation 1522. "Importation of Swine".
3. Regulation 2315. "Labeling Meat Products".
4. Regulation 3008. "Per Diem Pay to Deputy State Veterinarians".

New:

The following new Official Regulation was adopted during the fiscal year:

1. Chapter 37, Regulation 3701 and 3702. "Official Vaccination for Ram Epididymitis".

OFFICIAL ORDERS

The following Official Orders were issued during the fiscal year:

1. Order No. 209. "An Order Placing Dawson and Wibaux Counties Under Rabies Quarantine".
2. Order No. 210. "An Order Placing Valley, Daniels, Roosevelt and Sheridan Counties Under Rabies Quarantine".

LICENSES AND PERMITS ISSUED

<u>*Licenses</u>	<u>Total</u>
Artificial Inseminators.....	230
Garbage Feeding.....	13
Meat Depots.....	4
Meat Packing Houses.....	19
Milk Plants.....	39
Poultry Slaughterhouses.....	4
Producer Dairies.....	479
Rendering Plants.....	12
Retail Raw Dairies.....	19
Slaughterhouses.....	<u>62</u>
Total Licenses Issued.....	<u>881</u>
<u>Permits (To Import Into Montana)</u>	
Chicks and Hatching Eggs.....	69
Semen for Artificial Insemination (From 6 Breeding Services).....	<u>519</u>
Total Permits Issued.....	<u>588</u>
<u>TOTAL LICENSES AND PERMITS ISSUED.....</u>	<u>1,469</u>

\*License fees collected during the fiscal year and submitted to the State of Montana General Fund..... \$2,627.50

COOPERATING AGENCIES, DEPARTMENTS AND ASSOCIATIONS

The Montana Livestock Sanitary Board's duties and responsibilities are accomplished through the cooperation, advice and assistance of many. To the following we express our sincere thanks:

Montana City and County Health Departments

Montana Fish & Game Commission

Montana Independent Meat Packers Association

Montana Livestock Commission

Montana Milk Distributors

Montana Milk Producers

Montana Poultrymen

Montana State Board of Health

Montana State University:

Animal and Range Sciences Department

Cooperative Extension Service

Veterinary Research Laboratory

Montana Stockgrowers Association

Montana Swine Growers Association

Montana Veterinary Medical Association

Montana Wool Growers Association

Ray Foundation

Rocky Mountain Laboratory

U. S. Bureau of Sport Fisheries and Wildlife

U. S. Department of Agriculture:

Agricultural Research Service, Montana Branch

U. S. Public Health Service

SUMMARY OF OFFICIAL INSPECTIONS AND OFFICIAL TESTS

Following is a summary of official inspections and official tests made during the fiscal year:

OFFICIAL INSPECTIONS OR OFFICIAL TESTS

Animals inspected and field-tested.....	3,266,643
Ante mortem and post mortem animal inspections.....	106,133
Dairy and Milk Plant inspections.....	1,539
Garbage cooking inspections.....	199
Licenses issued.....	881
Meat-product labels inspected and approved.....	199
Milk Plant equipment tests.....	158
Pounds of processed meat inspected and reinspected.....	10,632,977
Slaughterhouse, Meat Packing House, Meat Depot and Rendering Plant inspections.....	167



FINANCIAL STATEMENTSTATEMENT OF APPROPRIATED FUNDS

## FUNDS AVAILABLE 7/1/65

General Fund

Operation & Capital... Encumbered.....	\$ 1,749
Operation..... Appropriations.....	155,435
Capital..... Appropriation.....	14,815
Grants & Benefits..... Appropriation.....	10,200
Meat Inspection..... Appropriation.....	<u>129,230</u>

Total General Funds Available..... \$311,429

Earmarked Revenue Fund

Operation..... Appropriation..... 155,350

Total All Funds Available..... \$466,779

## FUNDS EXPENDED

General Fund

Operation.....	\$148,622
Capital.....	11,065
Grants & Benefits.....	10,021
Meat Inspection.....	<u>113,707</u>

Total General Funds Expended..... \$283,415

Earmarked Revenue Fund

Operation..... 137,341

Total All Funds Expended..... 420,756

BALANCE 6/30/66..... \$ 46,023

STATEMENT OF LIVESTOCK SANITARY BOARD EARMARKED REVENUE FUND

CASH BALANCE 7/1/65..... \$ 39,314

Income

Matured U.S. Treasury Bills.....	20,000
Interest on U.S. Government Bonds.....	624
Livestock Taxes (3 Mills on Cattle & Sheep)...	<u>118,807</u>

Total Cash Balance and Income..... \$178,745

Expended

Appropriated Funds..... 137,341

CASH BALANCE 6/30/66..... \$ 41,404

\*STATEMENT OF LIVESTOCK SANITARY BOARD EMERGENCY EARMARKED REVENUE FUND

U.S. Government Bonds..... \$ 92,838

\*Reserve for emergency use in controlling dangerous disease outbreaks.

SUMMARY OF WORK PERFORMED

Following is a summary of official tests and examinations performed by the Diagnostic Laboratory during the fiscal year:

<u>OFFICIAL TEST OR EXAMINATION</u>	<u>NUMBER</u>
Autopsies Performed.....	1,312
Bacteriology, Pathology, Parasitology and Virology Findings:	
Positive.....	2,234
Negative.....	2,173
Bacteriology Milk Tests.....	14,051
Chemical Analyses.....	2,438
Serology Tests.....	<u>151,574</u>
Total.....	173,782
Tests Performed by Other Laboratories.....	171
Serology Field Tests.....	<u>26,185</u>
Total.....	<u>26,356</u>
<u>TOTAL OFFICIAL TESTS OR EXAMINATIONS.....</u>	<u>147,426</u>

## BACTERIOLOGY, PATHOLOGY, PARASITOLOGY AND VIROLOGY REPORT

## POSITIVE FINDINGS

	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS
				4																	Specimen No.
Abomasal ulcer.....				1									1				1				
Achromobacter sp.....				2																	
Actinobacillus				3																	
Tignieresi.....							1														
Actinomyces bovis.....																					
Adenocarcinoma.....				5	2								1			1	2		2		
Aerobacter aerogenes..																					
Alcaligenes																					
bronchisepticus.....								1													
Alcaligenes sp.....				3	1			1					1								Ice Balls 3
Alternaria sp.....				3																	
Anaplasma marginale...				22															1		
Anemia.....																					
Anoplocephala																					
perfoliata.....													1								
Anoplocephala sp.....													1								
Anorexia.....																			1		
Aortic rupture.....				1																	
Arizona																					
sp.....				2	6												2	1	1		Gold Fish 1
Arteriosclerosis.....																					Meat Meal 1
Arthritis.....				1																	
Ascaris equorum.....													1						1		
Ascaridia galli.....																					
Aspergillus fumigatus..					7																
Aspergillus restrictus				4	3	1							2								
Aspergillus sp.....				1																	
Asphyxiation.....				2																Hay 1	
Astragalus drummondi..																					
Atherosclerosis.....																				Plant 1	
Auto-agglutination titer													3			2					

## Bacteriology, Pathology, Parasitology and Virology Report

## POSITIVE FINDINGS

[illegible]



## Bacteriology, Pathology, Parasitology and Virology Report

## POSITIVE FINDINGS

	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS
				4	2														3		
<u>Citrobacter</u> sp.....																					
<u>Clostridium bifermentans</u>																					
<u>Clostridium carnis</u> ....				2				1													
<u>Clostridium chauvei</u> ...				15																	
<u>Clostridium difficile</u>				1																	
<u>Clostridium hemolyticum</u>				5																	
<u>Clostridium novyi</u> ....				4																	
<u>Clostridium perfringens</u>				2													2				
<u>Clostridium perfrin-</u>																					
<u>gens, Type A</u> .....				5													1				
<u>Clostridium perfrin-</u>																					
<u>gens, Type C</u> .....				15															1		
<u>Clostridium perfrin-</u>																					
<u>gens, Type D</u> .....				6															1		
<u>Clostridium perfrin-</u>																					
<u>gens, Type E</u> .....				1																	
<u>Clostridium septicum</u> ..				6																	
<u>Clostridium</u> sp.....				3																	
<u>Coccotetra sporium</u> sp.				1																	
<u>Colitis</u> .....																			1		
<u>Contracted tendons</u> ....				1																	
<u>Cooperia oncophora</u> ....				2																	
<u>Cooperia</u> sp.....				3																	
<u>Corynebacterium bovis</u> .				2																	
<u>Corynebacterium</u>																					
<u>diphtheriae</u> .....				1																	
<u>Corynebacterium equi</u> ..																					
<u>Corynebacterium ovis</u> ..																			1		
<u>Corynebacterium</u>																					
<u>paurometabolum</u> .....																					
<u>Corynebacterium pyogenes</u>																					
				27				2					1				5		3		

# Bacteriology, Pathology, Parasitology and Virology Report

## POSITIVE FINDINGS

Corynebacterium renale  
Corynebacterium sp...  
Coryza.....  
"Crooked calf" syndrome  
Crop Impaction.....  
Curvularia sp.....  
Cuterebra larva.....  
Cysticercus sp.....  
Damalinia ovis.....  
Damalinia sp.....  
Demodex folliculorum.  
Depraved appetite....  
Dictyocaulus filaria.  
Dictyocaulus viviparus  
Diplococcus pneumoniae  
Diplococcus sp.....  
Dipylidium caninum...  
Distemper.....  
Dystocia.....  
Edema, gut.....  
Egg bound.....  
Eimeria arloingi.....  
Eimeria auburnensis.  
Eimeria bovis.....  
Eimeria sp.....  
Eimeria stiedae.....  
Eimeria zurnii.....  
Emaciation.....  
Emphysema, pulmonary.  
Encephalitis.....  
Enteritis.....

[illegible]









## Bacteriology, Pathology, Parasitology and Virology Report

## POSITIVE FINDINGS

	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS
						1	1						5						1		
				4									1						1	Meat	
																			1		
					1																
			51					5				6						17			
								1													
					22			1													
					3																
			1														5				
																	1			Meat	
								2					1								
			1	2																Hay	
			18																		
			1		1																
													1					8			
			4														3				
			19	4			2						4						6		
			1										1							Ice Balls	3
													1								
			2													2					
			1																		
			6														5				
			1									2								Hay	10

Intussusception.....  
 Keloid.....  
 Klebsiella cloacae..  
 Klebsiella sp.....  
 Laminosloptes  
   cysticole.....  
 Leptosira sp.....  
 Leukemia.....  
 Leukosis.....  
 Lice, unidentified...  
 Llnognathus setosus..  
 Lipoma.....  
 Lunger.....  
 Listeria monocytogenes  
 Lymphocytoma.....  
 Lymphosarcoma.....  
 Mandibular phlegmon..  
 Manila pltophlla.....  
 Mastitis.....  
 Malanoma.....  
 Menopon gallinae.....  
 Mesenteric aneurysm..  
 Metastrongylus sp....  
 Metritis.....  
 Microblal sensitivity  
 Micrococcus sp.....  
 Microsporim canls....  
 Mixed infection.....  
 Monlezia benedeni....  
 Monlezia expansa.....  
 Mucor sp.....







## Bacteriology, Pathology, Parasitology and Virology Report

POSITIVE FINDINGS

BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS	
																				Specimen	No.
1																	15				
			2	1										1		11					
				3																	
			1																		
			1																		
			1									1									
																				Gosling	1
																				Meat Meal	1
			1																		
				3														1			
				1																	
												1						1		Mink	1
												1									
															2					Seed	1
			2									6						2			
			7					1				3								Hay	2
															1						
			4																		
			1																		
			4	2																	
			132	3			5					7			4	7				Porcupine	1
																				Canary	1

Rabies.....  
 Ram epididymitis  
 organism.....

Rhizopus niger.....  
 Riboflavin deficiency..  
 Rickets.....  
 Rizoctenla sp.....  
 Ruptured gall bladder..  
Salmonella derby.....  
Salmonella infantis....

newport.....  
providence..  
pulorum....  
san diego...  
typhimurium.  
typhimurium,  
 var.  
copenhagen

Salmonella sp.....  
Saponaria vaccaria.....  
Sarcoptes scabiei.....  
Sarcosporidiosis.....  
Scopulariopsis sp.....  
Snuffles.....  
Sphaerophorus  
necrophorus.....  
Spinal infection.....  
Staphylococcus aureus..  
Staphylococcus sp.....









## Bacteriology, Pathology, Parasitology and Virology Report

## NEGATIVE FINDINGS

Rabies (continued).....  
.....  
.....  
.....  
Ram epididymitis  
organism.....  
Salmonella sp.....  
.....  
.....  
.....  
Trichomonas fetus.....  
Trichina.....  
Vibrio fetus.....  
Virus isolation.....  
White muscle disease.....

## TOTAL NEGATIVE FINDINGS

[illegible]



## SEROLOGY REPORT

TEST	SOURCE	POSITIVE	NEGATIVE	SUSPICIOUS	VACCINATE	UNSATISFACTORY	ANTI-COMPLEMENTARY	TOTAL
Anaplasma CA.....	Cattle	215	419	3				637
Anaplasma CF.....	Cattle	165	381	169		74	5	794
Br. abortus agglutination.....	Antelope		1					1
Br. abortus agglutination.....	Buffalo		108	7				115
Br. abortus agglutination.....	Cattle	577	101,456	5,022	53	19		107,127
Br. abortus agglutination (field) Cattle	Cattle		651					651
Br. abortus agglutination.....	Deer		62	1				63
Br. abortus agglutination.....	Elk	3	1,232	17				1,252
Br. abortus agglutination.....	Goat		24	1				25
Br. abortus agglutination.....	Horse	8	29	19				56
Br. abortus agglutination.....	Sheep		11					11
Br. abortus agglutination.....	Swine		281	12				293
Br. ring.....	Cream		6,545	15				6,560
Br. ring.....	Milk		4,388	21				4,409
*Colorado Tick Fever CF.....	Cattle		19					19
*Colorado Tick Fever CF.....	Horse		4					4
**EBA Neutralization.....	Cattle	8	79	12				99
**IBR Neutralization.....	Cattle		39					39
L. pomona agglutination.....	Buffalo	8	78	7				93
L. pomona agglutination.....	Cattle	121	2,896	111				3,128
L. pomona agglutination.....	Chinchilla	1						1
L. pomona agglutination.....	Dog		3					3
L. pomona agglutination.....	Elk		158					158
L. pomona agglutination.....	Horse	2	10					12
L. pomona agglutination.....	Sheep		8					8
L. pomona agglutination.....	Swine	6	72	1				79
L. canicola agglutination.....	Dog		1					1
L. icterohemorrhagiae agglutination	Dog		1					1
REO CF.....	Sheep	119	237	6			19	381
S. pullorum agglutination (field) Chickens	Chickens	22	25,512					25,534
*St. Louis encephalitis CF.....	Horse		4					4
*Western equine encephalitis CF. Horse	Horse	12	4					16
TOTAL.....		1,267	144,713	5,424	53	93	24	151,574

\*Tests made by Rocky Mountain Laboratory, Hamilton.

\*\*Tests made by Veterinary Research Laboratory, Bozeman.

MILK, CREAM AND COTTAGE CHEESE BACTERIOLOGY REPORTMILK ANALYSES

Bacterial counts.....  
Coliform counts.....  
Mastitis tests.....  
Penicillin determinations.....

Total Milk Analyses.....

CREAM ANALYSES

Bacterial counts.....  
Coliform counts.....  
Penicillin determinations.....

Total Cream Analyses.....

COTTAGE CHEESE

Bacterial counts.....  
Coliform counts.....  
Penicillin determinations.....

Total Cottage Cheese Analyses.....

TOTAL MILK, CREAM AND COTTAGE CHEESE ANALYSES.....

IN COMPLIANCE	NOT IN COMPLIANCE
3,843	366
3,177	1,045
47	199
4,225	10
11,292	1,620
343	36
315	64
379	-0-
1,037	100
3	1
3	1
4	-0-
10	2
12,339	1,722

## CHEMICAL REPORT

## TOXICOLOGY ANALYSES

	ARSENIC		COPPER		CYANIDE		LEAD		MERCURY		PHOSPHORUS		STRYCHNINE	
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
Bones.....					1									2
Bovine blood.....		6					1	9		3				
Bovine brain.....							1							
Bovine hair.....		2												
Bovine kidney.....	1	6					4	10		1				
Bovine liver.....		18					7	20		12				
Bovine stomach content.....	9	61			2		5	65		28				
Canine liver.....	1	4						3		4				
Canine stomach content.....	1	10			1			8		4				
Cardboard.....								1			1		14	17
Caulking compound.....							1							
Chinchilla stomach content.....		1						1						
Equine liver.....		1						1						
Equine stomach content.....		7					1	3		1				
Feed.....		1						1		1				
Feline stomach content.....		3						2		1				3
Grain.....									1					
Goose.....		1						1						
Meat.....		2						2		2				5
Ovine liver.....			1											
Ovine stomach content.....	1	1										1		
Paint.....							1							
Porcine kidney.....									1	1				
Porcine liver.....									1	1				
Porcine stomach content.....	1	3						3						2
Powder.....		3						2		2			1	1
Soil.....		1						1						
Water.....		1												
Total Toxicology Analyses.....	14	132	1	-0-	-0-	4	21	133	3	61	-0-	1	16	30

Chemical Report

BLOOD ANALYSES																		
	CALCIUM			CAROTENE			MAGNESIUM			PHOSPHORUS			SGOT			VITAMIN A		
	High	Norm.	Low	High	Norm.	Low	High	Norm.	Low	High	Norm.	Low	High	Norm.	Low	High	Norm.	Low
Anticoagulant test...		23						23										
Avian.....								5			9	1					4	2
Bovine.....	25	43	10	6	35	6	11	32		23	50	15	1			23	28	5
Porcine.....						1												
Ovine.....	1							1				1						1
Total Blood Analyses.	26	66	10	6	35	7	11	61	-0-	23	59	17	1	-0-	-0-	23	32	8

MILK AND CREAM ANALYSES

Milk and cream samples..... 1.390

WATER FOR LIVESTOCK CONSUMPTION ANALYSES

Water samples.....	FIT	QUESTIONABLE	UNFIT
	26	4	7

QUANTATIVE NITRATE ANALYSES

Feed.....	FIT	QUESTIONABLE	UNFIT
Water.....	6	1	2
	25	3	5
Total Quantative Nitrate Analyses.....	31	4	7

RACE HORSE DRUG ANALYSES

Urine and saliva samples.....	POSITIVE	NEGATIVE	SUSPICIOUS
	-0-	70	-0-

MISCELLANEOUS ANALYSES.....

98

TOTAL ALL CHEMICAL ANALYSES.....

2,438



## AUTOPSIES PERFORMED REPORT

SPECIE	NUMBER	SPECIE	NUMBER
Badger.....	1	Mink.....	3
Bats.....	26	Muskrats.....	4
Beavers.....	3	Parakeet.....	1
Bobcats.....	2	Parrot.....	1
Canary.....	1	Peacock.....	1
Cats.....	44	Pheasants.....	9
Cattle.....	565	Porcupine.....	1
Chickens.....	146	Quail.....	1
Chinchillas.....	24	Rabbits.....	27
Chipmunks.....	2	Raccoons.....	12
Coyotes.....	3	Rats.....	2
Deer.....	1	Reindeer.....	1
Dogs.....	55	Sheep.....	111
Ducks.....	5	Skunks.....	74
Foxes.....	6	Squirrels.....	2
Geese.....	4	Swine.....	104
Gophers.....	14	Turkeys.....	4
Guinea pigs.....	10	Weasels.....	5
Hamsters.....	4		
Horses.....	13		
Mice.....	20		
		TOTAL AUTOPSIES PERFORMED.....	1,312

DISTRIBUTION OF LABORATORY TESTS AMONG SPECIES OF ANIMALS

SPECIE	NUMBER	PERCENT
Cattle.....	115,920.....	71.70
Chickens.....	25,967.....	16.06
Milk.....	15,444.....	9.55
Elk.....	1,423.....	.88
Sheep.....	832.....	.52
Swine.....	817.....	.51
Dogs.....	254.....	.16
Horses.....	240.....	.15
Buffalo.....	209.....	.13
Cats.....	98)	
Skunks.....	82)	
Deer.....	81)	
Rabbits.....	55)	
Chinchillas.....	35)	
Goats.....	29)	
Bats.....	25)	
Moose.....	23)	
Guinea pigs.....	21)	
Gophers.....	16)	
Raccoons.....	13)	
Foxes.....	7)	
Hamsters.....	6)	
Rats.....	6)	
Beavers.....	6)	
Ducks.....	6)	
Porcupines.....	5)	
Pheasants.....	4)	
Muskrats.....	4)	
Coyotes.....	3)	
Mink.....	3)	
Caribou.....	3)	
Canaries.....	2)	
Fishes.....	2)	
Bobcats.....	2)	
Raindeer.....	2)	
Moose.....	1)	
Turkey.....	1)	
Pigeon.....	1)	
Goose.....	1)	
Badger.....	1)	
Bear.....	1)	
Peacock.....	1)	
Quail.....	1)	
Parakeet.....	1)	
Weasel.....	1)	
Squirrel.....	1)	
TOTAL.....	161,656.....	100%

.34

## CATTLE DISEASES

Montana veterinarians reported 44 cattle diseases involving 31,182 cattle on 5,893 ranches. This is an increase of 4 diseases, 4,484 cattle and 115 ranches from the previous fiscal year.

### Anaplasmosis

A total of 90 cases of anaplasmosis on 69 ranches was reported by Montana veterinarians. This is a reduction of 179 cases and 61 ranches from the previous fiscal year.

The Diagnostic Laboratory tested 715 blood samples from cattle for anaplasmosis, with the Complement-Fixation Test, and 46% showed positive or suspicious reactions. The Capillary Agglutination Tube Test for anaplasmosis was applied to 637 bovine blood samples, with 32% giving a positive reaction. The tests, again this fiscal year, confirm that the number of carrier animals in the Montana enzootic area is high. The potential remains for a recurrence of the heavy losses reported during the summer and fall of 1964.

The capability of the anaplasmosis infectious agent being carried over from year to year in ticks, deer and possibly other wildlife leaves only one practical way to attempt to control anaplasmosis in a range or semi-range area in Montana..... that way is through an effective immunizing agent.

Fort Dodge Laboratories, Fort Dodge, Iowa, started, during the year, to commercially manufacture the anaplasmosis vaccine "Anaplaz", developed by the College of Veterinary Medicine, University of Oklahoma. Reports received indicate that about 7,517 doses of the vaccine were used in Montana during the fiscal year.

In order to evaluate the effectiveness of the vaccine in Montana, Fort Dodge Laboratories gave 600 doses to the Livestock Sanitary Board to be used in field-trials. The vaccine was administered to 248 cattle in three different herds in the enzootic area. An equal number of cattle was left unvaccinated in each herd. Deputy State Veterinarians will investigate all illnesses and death losses during the summer and fall and will obtain blood samples after the anaplasmosis season late in the fall of 1966.

### Brucellosis

A total of 160,969 cattle was tested for brucellosis, revealing 602 reactors (0.31%) and 6,374 suspects (3.35%). Of the total tested, 51,886 were tested out-of-state and 62,909 were tested from samples collected in Montana on the market-cattle-testing program. The total number of cattle tested was 37,091 more than was tested during the 1965 fiscal year. The percentage of reactors was 0.35% in the 1965 fiscal year, compared with 0.31% in the 1966 fiscal year.

There were 10,969 Brucellosis Ring Tests made on milk and cream samples - a decrease of 2,442 from the previous year. Thirty-seven (0.34%) were suspicious to the test, compared with 0.32% in the 1965 fiscal year.

There was a reduction of brucellosis infected herds in Montana. With 37 herds from last year, 44 additional infected herds were found during the past fiscal

year. A total of 51 herds were able to eliminate brucellosis, leaving 30 herds still under brucellosis quarantine at the end of the fiscal year.

Nineteen counties were recertified as Modified-Certified Brucellosis Areas during the fiscal year.

### REDUCTION OF BRUCELLOSIS-INFECTED HERDS

<u>Fiscal Year</u>	<u>Number of Infected Herds</u>	<u>Percent Infected Herds in Montana</u>
First Area Test in Montana.....	2,434.....	7.96%
July 1, 1957.....	666.....	2.36%
July 1, 1958.....	357.....	1.24%
July 1, 1959.....	238.....	0.92%
July 1, 1960.....	135.....	0.56%
July 1, 1961.....	93.....	0.34%
July 1, 1962.....	49.....	0.16%
July 1, 1963.....	44.....	0.15%
July 1, 1964.....	36.....	0.14%
July 1, 1965.....	37.....	0.14%
July 1, 1966.....	30.....	0.12%

### PROGRESS OF BOVINE BRUCELLOSIS ERADICATION IN MONTANA COUNTIES

<u>County</u>	<u>Herds Infected</u>		<u>Herds Infected</u>	
	<u>First</u>	<u>Area Test</u>	<u>June 30,</u>	<u>1966</u>
	<u>No.</u>	<u>Percent</u>	<u>No.</u>	<u>Percent</u>
Beaverhead.....	75....	18.7%.....	None.....	None
Blaine.....	30....	4.6%.....	None.....	None
Broadwater.....	54....	23.6%.....	None.....	None
Carbon.....	149....	13.9%.....	None.....	None
Cascade.....	140....	13.9%.....	None.....	None
Choteau.....	35....	5.2%.....	None.....	None
Daniels.....	18....	5.9%.....	None.....	None
Dawson.....	34....	4.6%.....	None.....	None
Deer Lodge.....	26....	24.7%.....	None.....	None
Fallon.....	18....	5.3%.....	None.....	None
Fergus.....	106....	10.7%.....	None.....	None
Gallatin.....	62....	6.4%.....	None.....	None
Garfield.....	27....	7.5%.....	None.....	None
Golden Valley.....	24....	12.1%.....	None.....	None
Granite.....	28....	16.3%.....	None.....	None
Jefferson.....	32....	13.6%.....	None.....	None
Judith Basin.....	59....	12.6%.....	None.....	None
Liberty.....	7....	4.2%.....	None.....	None
Lincoln.....	15....	5.3%.....	None.....	None
Madison.....	87....	14.2%.....	None.....	None
McCone.....	17....	3.6%.....	None.....	None



Continued

County	Herds Infected		Herds Infected	
	First	Area Test	June 30, 1966	
	No.	Percent	No.	Percent
Meagher.....	54....	34.3%.....	None.....	None
Musselshell.....	27....	9.0%.....	None.....	None
Petroleum.....	27....	19.1%.....	None.....	None
Powder River.....	4....	1.4%.....	None.....	None
Powell.....	51....	17.4%.....	None.....	None
Prairie.....	20....	11.9%.....	None.....	None
Roosevelt.....	50....	8.4%.....	None.....	None
Rosebud.....	39....	3.9%.....	None.....	None
Sheridan.....	23....	3.7%.....	None.....	None
Silver Bow.....	8....	8.7%.....	None.....	None
Stillwater.....	52....	7.1%.....	None.....	None
Sweet Grass.....	56....	12.1%.....	None.....	None
Teton.....	35....	5.2%.....	None.....	None
Toole.....	13....	4.6%.....	None.....	None
Treasure.....	26....	15.8%.....	None.....	None
Wheatland.....	17....	12.3%.....	None.....	None
Wibaux.....	23....	8.4%.....	None.....	None
Carter.....	34....	7.9%.....	1.....	0.2%
Custer.....	5....	1.7%.....	1.....	0.3%
Flathead.....	30....	2.6%.....	1.....	0.1%
Hill.....	31....	6.2%.....	1.....	0.2%
Lake.....	105....	7.8%.....	1.....	1.0%
Lewis & Clark.....	67....	17.1%.....	1.....	0.3%
Mineral.....	3....	4.3%.....	1.....	0.1%
Missoula.....	60....	10.3%.....	1.....	0.3%
Park.....	50....	10.6%.....	1.....	0.3%
Phillips.....	30....	4.8%.....	1.....	0.2%
Pondera.....	36....	6.4%.....	1.....	0.3%
Ravalli.....	35....	3.3%.....	1.....	0.9%
Sanders.....	47....	7.5%.....	1.....	0.2%
Valley.....	33....	4.4%.....	2.....	0.4%
Richland.....	46....	3.9%.....	3.....	0.4%
Yellowstone.....	91....	7.7%.....	3.....	0.3%
Glacier.....	88....	17.7%.....	4.....	0.8%
Big Horn.....	91....	13.2%.....	5.....	0.7%

## \*CALVES OFFICIALLY VACCINATED WITH BRUCELLA ABORTUS VACCINE - STRAIN 19

Year	Doses	Year	Doses	Year	Doses	Year	Doses	Year	Doses
1957..	296,463	1959..	294,265	1961..	224,576	1963..	250,899	1965..	267,367
1958..	303,090	1960..	215,043	1962..	209,472	1964..	297,002	1966..	287,642

\*In addition, reports were received that 10,461 doses of Brucella abortus vaccine were sold, indicating that many calves were unofficially vaccinated.

### Fluorosis

Montana veterinarians reported fluorosis in 214 cattle on six premises during the fiscal year. Again, as last year, all cases were reported in an area adjacent to a phosphate plant.

### Rhinotracheitis

Montana veterinarians reported 2,814 cases of rhinotracheitis on sixty-six ranches. They also reported 295 cases of vulvovaginitis on two ranches. The laboratory was unable to attribute a bacteriological cause to 520 aborted feti. From recent studies, it can be assumed that the cause of the vulvovaginitis and a share of the bacteriologically negative aborted feti were due to the infectious bovine rhinotracheitis virus.

### Shipping Fever

This disease was - by far - the most serious disease problem experienced by cattlemen this past fiscal year. Veterinarians reported 11,152 cases on four hundred thirty-five ranches.

### Tuberculosis

The tuberculin test was applied to 2,836 dairy cattle and 11,547 beef cattle - a total of 14,383. Two cattle in 2 dairy herds and two cattle in 2 beef herds gave positive reaction and were under quarantine at the end of the fiscal year.

A total of 114,795 cattle was slaughtered under backtag or brand identification. Seventy-four cattle (0.064%) were found to have lesions grossly resembling tuberculosis lesions.

A review of information received on investigation of gross lesions obtained at slaughter for the past four years reveals the following:

1. 156 cattle were reported with gross lesions.

2. Location of Lesions:

72%.....	Mesenteric lymph nodes.
10%.....	Mediastinal lymph nodes.
9%.....	Cervical lymph nodes.
9%.....	Bronchial lymph nodes, pleural and lungs.

3. Histological Examination:

35%.....	Suggestive of tuberculosis.
11%.....	Migrating parasites.
27%.....	Acid-fast bacilli demonstrated.
27%.....	Acid-fast bacilli <u>not</u> demonstrated.

4. Mycobacterium Isolations:

24.7%.....	<u>Mycobacterium avium</u> .
3.2%.....	Runyon Group IV.
1.1%.....	<u>Mycobacterium bovis</u> .
71.0%.....	No isolation made.

A total of 58 herds, containing 5,432 cattle, was tested (from which cattle were found to have gross lesions at slaughter) in which histological examinations were suggestive of tuberculosis, or acid-fastness were demonstrated, or a Mycobacterium was isolated. Three reactors were found in one herd. Slight gross lesions were found in two of the reactors. Mycobacterium avium was isolated from one. We have yet to find bovine tuberculosis in a herd of origin of cattle from which slight mesenteric lymph node lesions or other lymph node lesions were found at slaughter. In some instances, chickens with tuberculosis were found to be associated with the cattle.

Twelve counties were reaccredited Modified-Accredited Tuberculosis Areas during the fiscal year.

### Vibriosis

Montana veterinarians reported 129 cases of vibriosis on twenty-four ranches. The laboratory isolated Vibro-fetus from 57 cattle specimens.

### Virus Abortion

The enzootic bovine abortion virus has been definitely isolated from a herd of 105 cattle in which a 70% abortion rate had occurred. It is suspected this virus is more widespread than heretofore suspected.

## HORSE DISEASES

A total of 11 diseases in 1,231 horses was reported on seven hundred sixty-two ranches. This is an increase of 4 diseases, 255 horses and 303 premises over last year.

### Encephalitis

Montana veterinarians reported 333 cases of equine encephalitis on two hundred eighty-five premises. This was a marked increase of 324 cases and 276 premises over the previous fiscal year.

The Rocky Mountain Laboratory summarized their studies of the encephalitis outbreak in the summer and fall of 1965 as follows:

#### Human Specimens

Sera from 54 cases submitted and 17 (31.5%) were serologically confirmed for Western Equine Encephalitis. Thirty-six were negative; but from 7 of these, only a single (acute) specimen was received. One was confirmed for St. Louis Encephalitis.

#### Horses

Sera from 55 horses submitted and 20 (36.3%) were serologically confirmed for Western Equine Encephalitis.

The Western Equine Encephalitis virus was active in August, 1965. These were confirmed clinical cases in man and horses. High infection rates were found in Culex tarsalis mosquitos and in chickens. Evidence of infection in snakes has not been found. This question will be investigated further when snakes come out in the spring. After a season when there was so much activity of the virus, they should be positive if they play a role in the ecology of Western Equine Encephalitis."

### SHEEP DISEASES

Eighteen sheep diseases were reported during the fiscal year by Montana veterinarians on one hundred eighty-eight ranches in 12,883 sheep. This was the same number of diseases reported last year, but an increase of eighty-seven ranches and 5,091 affected sheep.

#### Epididymitis

Montana veterinarians reported 79 cases of ram epididymitis on fifteen ranches. The laboratory tested 362 blood sera, using the REO Complement-fixation Test and 34% gave reactions to the test.

#### Foot rot

Infectious foot rot continued to remain a problem in four bands in Montana. Persistent efforts are continuing in order to achieve complete eradication.

#### Pediculosis

Due to complaints from buyers of lambs having lice, particularly from one part of the state, many flocks of sheep in that area were inspected. All bands inspected in which lice were found (Damalinia ovis) were placed under quarantine, in accordance with Regulation 1104. A total of 48 bands, containing about 10,800 sheep, was quarantined. At the end of the fiscal year, 23 bands, containing 6,310 sheep, had been dipped and released from quarantine.



SWINE DISEASES

Montana veterinarians reported 12 swine diseases in 570 swine on seventy-four premises.

Brucellosis

No clinical evidence of brucellosis was reported. The laboratory did not isolate a Brucella organism from any swine. Serological tests made on 293 swine blood samples did not disclose any reactors.

The following herds became validated or were revalidated Brucellosis-free Swine Herds during the fiscal year, in accordance with the provisions of Regulation 310:

BRUCELLOSIS-FREE SWINE HERDS

Owner	Location	Effective Date
Calvin Arneson.....	Bozeman.....	1-4-66
Fred Bergstrom.....	Brady.....	6-6-66
Walter Herman.....	Bozeman.....	2-16-66
M. E. Muller & Sons.....	Corvallis.....	2-24-66
Perry Farms.....	Fort Benton.....	5-18-66
Loran A. Perry.....	Fort Benton.....	4-8-66
Howard Rabel.....	Gold Creek.....	5-23-66
Robert W. Rogers.....	Hamilton.....	3-21-66
Sherman Smith.....	Bozeman.....	2-11-66
U. S. Range Livestock Experiment Station..	Miles City.....	11-10-65

Hog Cholera

No hog cholera was reported in Montana during the fiscal year.

The history of hog cholera and its eradication from Montana is illustrated as follows:

1927 - 1946..... 551 outbreaks.  
 1948..... PROHIBITED USE OF LIVE-VIRUS VACCINES.  
 1947 - 1956..... 76 outbreaks.  
 1953..... LAW ENACTED PROHIBITING THE FEEDING OF RAW GARBAGE.  
 1957 - 1964..... 6 outbreaks.  
 1964..... PROHIBITED THE USE OF MODIFIED-LIVE-VIRUS VACCINE.  
 1965 - 1966..... No outbreaks.  
 1966..... USDA RECOGNIZED MONTANA AS A HOG-CHOLERA-FREE STATE.

Swine Tuberculosis

State meat inspection findings revealed that out of 55,605 swine, two (0.003%) were condemned as unfit for food because of tuberculosis lesions; and 1,270 (2.280%) swine had tuberculosis lesions requiring condemnation of a part of the animal.

POULTRY DISEASES

Seven poultry diseases were reported on eighteen premises in 472 chickens.

Salmonella

All breeding flocks supplying hatchery eggs were tested for pullorum disease. A total of 25,534 chickens was tested and 22 reactors (0.086%) were found. Salmonella pullorum was isolated from 3 chickens, Salmonella newport from 1 chicken and Salmonella san diego from 1 chicken submitted to the laboratory.

WILD ANIMAL DISEASESRabies

The threat of rabies becoming endemic for the first time in Montana history became a reality during the fiscal year. The laboratory conducted 289 rabies tests on specimens submitted from 22 species of animals.

Following is a chronological listing of laboratory-confirmed rabies for the fiscal year:

POSITIVE RABIES

Date	Town	County	Specie
10-11-65.....	Belgrade.....	Gallatin.....	Bat
12-20-65.....	Hodges.....	Dawson.....	Skunk
1-11-66.....	Larslan.....	Valley.....	Skunk
2-1-66.....	Glendive.....	Dawson.....	Skunk
2-4-66.....	Richland.....	Valley.....	Skunk
2-25-66.....	Wolf Point.....	Roosevelt.....	Skunk
3-22-66.....	Plevna.....	Fallon.....	Skunk
3-30-66.....	Baker.....	Fallon.....	Skunk
4-12-66.....	Plevna.....	Fallon.....	Skunk
4-12-66.....	Baker.....	Fallon.....	Skunk
4-15-66.....	Plevna.....	Fallon.....	Skunk
4-15-66.....	Plevna.....	Fallon.....	Skunk
4-18-66.....	Ekalaka.....	Carter.....	Skunk
4-18-66.....	Ekalaka.....	Carter.....	Skunk
4-26-66.....	Broadus.....	Powder River.....	Skunk
5-18-66.....	Wolf Point (near)...	Valley.....	Skunk

---

---

OFFICIAL ANIMAL INSPECTIONS REPORT

---

---

<u>SPECIE</u>	<u>TOTAL INSPECTED</u>
<u>Cattle</u>	
Inspected for interstate shipment.....	753,404
Inspected at markets.....	933,717
Inspected for scabies.....	32,192
Backtagged.....	224,760
Bled for brucellosis.....	44,322
Tested for tuberculosis - Dairy.....	2,836
Tested for tuberculosis - Beef.....	11,547
Miscellaneous inspections.....	<u>8,251</u>
Total Cattle.....	2,011,029
<u>Horses</u>	
Inspected for interstate shipment.....	3,874
Inspected at markets.....	10,773
Miscellaneous inspections.....	<u>658</u>
Total Horses.....	15,305
<u>Sheep</u>	
Inspected for interstate shipment.....	673,431
Inspected at markets.....	202,778
Miscellaneous inspections.....	<u>8,637</u>
Total Sheep.....	884,846
<u>Swine</u>	
Inspected for interstate shipment.....	306
Inspected at markets.....	137,559
Miscellaneous inspections.....	<u>2,251</u>
Total Swine.....	140,116
<u>Poultry</u>	
Inspected for interstate shipment.....	589
Miscellaneous inspections.....	<u>26,437</u>
Total Poultry.....	27,026
<u>Dogs and Miscellaneous Animals</u>	
Inspected for interstate shipment.....	1,628
Miscellaneous inspections.....	<u>410</u>
Total Dogs and Miscellaneous Animals.....	<u>2,038</u>
<u>TOTAL ALL OFFICIAL ANIMAL INSPECTIONS.....</u>	<u>3,030,360</u>

## MONTANA VETERINARIANS' DISEASE REPORT

	CATTLE	HORSES	SHEEP	SWINE	POULTRY	DOGS
	Cases	Cases	Cases	Cases	Cases	Cases
	Herds	Herds	Herds	Herds	Flocks	Cases
Actinomycosis-bacillosis.....	1,910					
Bacillary hemoglobinuria.....	102					
Black disease.....			2			
Blackleg.....	56					
Bruceellosis.....	602					
Diphtheria.....	54					
Distemper.....		777				
Enteritis, <u>E. coli</u> .....	1,221			15		
Enteritis, necrotic.....				20		
Enteritis, <u>S. typhimurium</u> .....	2			1		
Enterotoxemia.....	51		225			
Eplidymitis.....			79			
Erysipelas.....				300		
Foot rot.....	193		588			
Leptospirosis.....	177	5	27	10		82
Listeriosis.....	11	6		7		
Malignant edema.....	13	1				
pneumonia.....	74	57		4		
Pullorum.....					32	
<u>S. arizona</u> .....					60	
Tetanus.....		3	38			
Tuberculosis.....	4				259	
Vibriosis.....	129		152			
Total Bacterial Diseases.....	4,599	2,013	1,084	357	351	82
Atrophic rhinitis.....				120		
Avitaminosis A.....	234				5	2
Grass tetany.....	3					
White muscle disease.....	90		154			
Total Nutritional Diseases...	327	95	154	120	5	2

## NUTRITIONAL DISEASES



## Montana Veterinarians' Disease Report

PARASITIC DISEASES	CATTLE		HORSES		SHEEP		SWINE		POULTRY		DOGS	
	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Flocks	Cases	Cases
Face fly.....	180	11										
Helminthiasis.....	1,110	9			7,252	12						
Mange, demodectic.....							28	4				7
Mange, sarcoptic.....					10,800	48						
Pediculosis.....												
Total Parasitic Diseases.....	1,290	20			18,052	60	28	4				7
POISONING												
Algae.....	1	1										
Cyanide.....	4	3										
Fluoride.....	214	6										
Loco.....			33	2								
Nitrate.....	2	1			7	1	4	1				
Photosensitization.....	70	6	1	1	12	1						
Salt.....							4	1				
Strychnine.....												3
Sweet clover.....	112	2										
Total Poisoning.....	403	19	34	3	19	2	8	2				3
VIRAL DISEASES												
Contagious ecthyma.....												
CRD.....					1,547	35					12	2
Distemper.....												
Encephalitis.....			333	285								903
Enzootic bovine abortion.....	26	4										
Infectious anemia.....			11	9								

## Montana Veterinarians' Disease Report

Viral Diseases Continued	CATTLE		HORSES		SHEEP		SWINE		POULTRY		DOGS	
	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Flocks	Cases	Cases
Infectious anemia.....			11	9								
Infectious bronchitis.....			55	11								
Infectious hepatitis.....												
Influenza.....			9	8			14	3				112
Leukemia.....	1	1										
Leukosis.....												
Malignant catarrhal fever.....	3	3							103	3		1
Meningoencephalitis.....	2	1										
Mucosal disease.....	708	50										
Posthitis.....					25	11						
Rhinotracheitis.....	2,814	66										
Shipping fever.....	11,512	435					60	1				
TGE.....												
Ulcerative dermatosis.....					202	2						
Virus diarrhea.....	393	8										
Vulvovaginitis.....	295	2										
Warts.....	75	22										
Total Viral Diseases.....	15,829	592	408	313	1,774	48	74	4	115	5		1,016
UNKNOWN ETIOLOGY												
Cancer eye.....	1,798	1,415										
Enteritis, non-specific.....	406	8										
Infectious keratitis.....	1,323	74			1,068	4						
Mandibular phlegmon.....	13	12										
Pulmonary emphysema.....	456	178	3	2								
Polioencephalomalacia.....	9	1										
Urolithiasis.....	1,492	1,051			25	1						
Total Unknown Etiology.....	5,497	2,739	3	2	1,093	5						
GRAND TOTAL ALL DISEASES.....	31,182	5,893	1,231	767	22,276	213	587	37	473	18		1,108

## ETIOLOGICAL AGENTS RESPONSIBLE FOR DISEASES REPORTED BY MONTANA VETERINARIANS

Following is a percentage distribution of etiological agents responsible for the diseases reported by Montana Veterinarians during the 1966 fiscal year:

CAUSE OF DISEASES	CATTLE	HORSES	SHEEP	SWINE	POULTRY	DOGS
Bacteria.....	14.7%.....	63.9%.....	4.9%.....	60.8%.....	74.2%.....	7.4%
Nutrition.....	1.1%.....	-0- .....	.7%.....	20.4%.....	1.1%.....	-0-
Parasites.....	4.1%.....	-0- .....	81.0%.....	4.8%.....	-0- .....	.6%
Poisons.....	1.3%.....	2.8%.....	.1%.....	1.4%.....	-0- .....	.3%
Protozoa.....	10.4%.....	-0- .....	.4%.....	-0- .....	.4%.....	-0-
Viruses.....	50.8%.....	33.1%.....	8.0%.....	12.6%.....	24.3%.....	91.7%
Unknown.....	17.6%.....	.2%.....	4.9%.....	-0- .....	-0- .....	-0-

## IMPORTS INTO MONTANA

STATE OF ORIGIN	CATTLE	HORSES	SHEEP	SWINE	POULTRY	DOGS & MISC ANIMALS	TOTAL
Alabama.....						2	2
Alaska.....						37	37
Arizona.....	962	78	6			17	1,063
Arkansas.....		3				41	44
California.....	327	76				117	520
Colorado.....	1,959	96	214	16		33	2,318
Connecticut....						2	2
Florida.....						4	4
Georgia.....						3	3
Idaho.....	15,886	73	6,369	2		30	22,360
Illinois.....	50	7		1,734		10	1,801
Iowa.....	851			12,280		31	13,162
Kansas.....	298	33				26	357
Kentucky.....		1					1
Louisiana.....	444					1	445
Michigan.....	1					4	5
Minnesota.....	2,236	16	850	22,006		54	25,162
Mississippi....						1	1
Missouri.....	189	15				11	215
Nebraska.....	893	135	14	1,858		44	2,944
Nevada.....	349						349
New Jersey.....	7	2					9
New Mexico.....	219	22				4	245
New York.....	14						14
North Carolina..		2				1	3
North Dakota...	24,498	367	7,744	1,940		12	34,561
Ohio.....						4	4
Oklahoma.....	663	26				13	702
Oregon.....	1,441	59					1,500
South Dakota...	10,032	113	8,001	14,306		19	32,471
Tennessee.....						3	3
Texas.....	9,490	49				10	9,549
Utah.....	1,023	54	8			24	1,109
Washington.....	3,554	192	1,433	6	158,741	157	164,083
Wisconsin.....	564	10				12	586
Wyoming.....	23,218	209	18,690	112		37	42,266
FOREIGN COUNTRIES							
Canada.....	30,303	904	9,468	169	1,675	39	42,558
Mexico.....	1,439						1,439
TOTAL IMPORTS	130,910	2,542	52,797	54,429	160,416	803	401,897



OUT-OF-STATE BREEDERS HOLDING PERMITS TO IMPORT SEMEN FOR ARTIFICIAL INSEMINATION

Upon receipt and review of official health certificates on each individual sire, certifying to many tests and clinical inspections proving freedom from infectious or communicable diseases, an annual permit is issued to ship bovine semen into Montana to be used for artificial insemination. Annual permits were granted to the following during the fiscal year:

PERMITS TO IMPORT SEMEN FOR ARTIFICIAL INSEMINATION

<u>COMPANY</u>	<u>NUMBER OF STUOS</u>
All West Breeders Burlington, Washington.....	55
American Breeders Service, Inc. DeForest, Wisconsin.....	147
Armour & Company Denver, Colorado.....	126
Cache Valley Breeding Association Logan, Utah.....	29
Curtiss Breeding Service, Inc. Cary, Illinois.....	141
International Beef Breeders Denver, Colorado.....	21
<u>TOTAL PERMITS ISSUED.....</u>	<u>519</u>

OUT-OF-STATE HATCHERYMEN HOLDING PERMITS TO IMPORT BABY CHICKS AND HATCHING EGGS

Upon certified proof of freedom from pullorum and other infectious diseases, annual permits were issued to 69 hatcheries, located in seventeen states and Canada, to ship baby chicks and hatching eggs into Montana during the fiscal year.

OFFICIAL INSPECTIONS MADE AT MONTANA LIVESTOCK MARKETS

MARKET LOCATION	CATTLE	HORSES	SHEEP	SWINE	TOTAL
Billings Commission....	152,567....	1,746....	46,723....	-0-....	201,036
Billings Public.....	103,696....	2,045....	79,391....	98,848....	283,980
Bozeman.....	45,334....	167....	18,461....	8,599....	72,561
Butte.....	78,419....	221....	394....	6,130....	85,164
Dillon.....	19,618....	620....	13,818....	3,253....	37,309
Glasgow.....	44,524....	289....	3,285....	8,018....	56,116
Glendive.....	38,704....	244....	767....	2,113....	41,828
Great Falls.....	58,896....	356....	340....	38....	59,630
Hamilton.....	9,160....	177....	1,968....	1,568....	12,873
Havre.....	39,331....	218....	481....	-0-....	40,030
Kalispell.....	22,189....	360....	834....	3,986....	27,369
Lewistown.....	65,329....	804....	13,800....	-0-....	79,933
Miles City.....	54,042....	1,553....	7,613....	188....	63,396
Missoula.....	71,297....	2,138....	4,704....	5,281....	83,420
Shelby.....	26,448....	24....	258....	-0-....	26,730
Sidney.....	100,910....	722....	8,812....	-0-....	110,444
<u>TOTAL INSPECTIONS.....</u>	<u>930,464....</u>	<u>11,684....</u>	<u>201,649....</u>	<u>138,022....</u>	<u>1,281,819</u>

GARBAGE FEEDING ESTABLISHMENTS

In accordance with Section 46-2602 (RCM 1947), thirteen garbage feeding establishments were issued licenses during the fiscal year. This is a decrease of three from the previous fiscal year.

The proper cooking of garbage being fed to swine was most instrumental in eradicating hog cholera in Montana, as well as controlling and eliminating diseases of public health significance.

A total of 199 garbage feeding establishment inspections were made during the fiscal year, with the cooperation of the U. S. Department of Agriculture, to assure compliance with Montana Livestock Sanitary Board Regulations.

SUMMARY OF WORK PERFORMED

Montana licensed Milk Plants distributed 23,669,885 gallons of pasteurized milk, cream and fluid milk products to Montana consumers during the fiscal year. This is a total of 64,849 gallons a day.

Montana licensed Retail Raw Dairies distributed 279,590 gallons of raw milk during the fiscal year. This is a total of 766 gallons a day.

Raw milk accounts for 1.2% of the total milk supply offered to Montana consumers; and 98.8% of the milk, cream and fluid milk products distributed in Montana has the added public health protection of pasteurization.

Following is a summary of sanitary inspections and laboratory tests made during the fiscal year to assure Montana consumers that their milk came from healthy cows and is produced, handled and processed under strictly sanitary conditions:

OFFICIAL INSPECTIONS AND TESTS  
OF  
MILK, MILK PRODUCTS, DAIRIES AND MILK PLANTS

<u>INSPECTIONS AND TESTS</u>	<u>NUMBER</u>
Antibiotic detection tests.....	4,596
Bacterial counts.....	4,570
Brucellosis ring tests.....	10,970
Chemical analyses.....	1,394
Coliform tests.....	4,583
Dairy Inspections.....	1,386
Mastitis tests.....	246
Milk Plant inspections.....	153
Milk Plant equipment tests.....	158
Tuberculosis tests.....	<u>2,836</u>
<u>TOTAL.....</u>	<u>30,892</u>

MILK PLANT SANITATION COMPLIANCE RATINGS  
WITH  
MONTANA LIVESTOCK SANITARY BOARD REGULATIONS

MILK PLANT NUMBER	GALLONS SOLD DAILY	PLANT SCORE	PRODUCER'S SCORE	PASTEURIZED MILK RATING
25-1.....	2,700.....	94%.....	93%.....	93%
25-2.....	4,000.....	93%.....	91%.....	92%
25-7.....	1,500.....	91%.....	98%.....	94%
25-8.....	150.....	80%.....	73%.....	77%
25-10.....	7,000.....	100%.....	93%.....	94%
25-11.....	225.....	93%.....	92%.....	93%
25-13.....	15.....	83%.....	85%.....	84%
25-14.....	40.....	78%.....	66%.....	70%
25-15.....	100.....	98%.....	98%.....	98%
25-16.....	4,000.....	91%.....	93%.....	92%
25-17.....	60.....	90%.....	92%.....	91%
25-18.....	5,000.....	90%.....	94%.....	92%
25-19.....	2,000.....	93%.....	91%.....	92%
25-20.....	3,300.....	91%.....	92%.....	91%
25-21.....	3,650.....	98%.....	91%.....	95%
25-22.....	148.....	94%.....	96%.....	95%
25-23.....	100.....	97%.....	95%.....	96%
25-24.....	200.....	82%.....	82%.....	82%
25-25.....	3,000.....	87%.....	94%.....	93%
25-28.....	1,100.....	77%.....	94%.....	92%
25-29.....	100.....	95%.....	97%.....	96%
25-30.....	800.....	91%.....	90%.....	90%
25-31.....	2,000.....	75%.....	90%.....	83%
25-32.....	7,500.....	92%.....	92%.....	92%
25-33.....	250.....	94%.....	85%.....	90%
25-35.....	300.....	69%.....	90%.....	80%
25-36.....	180.....	91%.....	88%.....	90%
25-37.....	1,645.....	83%.....	95%.....	89%
25-38.....	2,400.....	96%.....	94%.....	95%
25-39.....	1,500.....	91%.....	90%.....	90%
25-40.....	1,500.....	90%.....	94%.....	92%
25-41.....	300.....	88%.....	97%.....	93%
25-43.....	86.....	86%.....	93%.....	90%
25-44.....	2,000.....	94%.....	94%.....	94%
25-45.....	200.....	86%.....	86%.....	86%
25-46.....	400.....	84%.....	87%.....	86%
25-47.....	4,800.....	69%.....	84%.....	77%
25-49.....	200.....	93%.....	89%.....	91%
25-50.....	400.....	87%.....	100%.....	94%
TOTAL.....	64,849.....	88%.....	91%.....	90%



RETAIL RAW DAIRIES SANITATION COMPLIANCE RATINGS  
WITH  
MONTANA LIVESTOCK SANITARY BOARD REGULATIONS

DAIRY NUMBER	GALLONS SOLD DAILY	DAIRY SCORE
R-1.....	40.....	94%
R-2.....	100.....	99%
R-4.....	30.....	97%
R-6.....	100.....	73%
R-7.....	20.....	96%
R-10.....	40.....	76%
R-11.....	20.....	97%
R-14.....	15.....	87%
R-19.....	60.....	78%
R-21.....	25.....	80%
R-23.....	50.....	91%
R-24.....	12.....	71%
R-25.....	100.....	87%
R-29.....	60.....	95%
R-32.....	50.....	86%
R-33.....	20.....	87%
R-34.....	24.....	97%
<b>TOTAL.....</b>	<b>766.....</b>	<b>88%</b>

SUMMARY OF WORK PERFORMED

The Montana Livestock Sanitary Board maintained meat inspection in 20 slaughterhouses and 8 meat packing houses. The U. S. Department of Agriculture maintained meat inspection in 6 slaughterhouses. Thirty-six slaughtering establishments operated without meat inspection.

A total of 572,900 animals was slaughtered in licensed establishments last fiscal year. Of the total, 77% was slaughtered under federal meat inspection, 19% was slaughtered under state meat inspection and 4% was slaughtered in establishments without meat inspection.

An estimated total of 1,571,005 pounds of meat was found totally unfit for human consumption and removed from food channels in the State of Montana during the fiscal year.

Forty-eight diseases and miscellaneous other conditions were found in the animals slaughtered under state meat inspection, which caused the entire animal or part of the animal to be unfit for human consumption and resulted in condemnation.

OFFICIAL ESTABLISHMENT INSPECTIONS

<u>TYPE OF ESTABLISHMENT</u>	<u>NO. OF INSPECTIONS</u>
Slaughterhouses.....	126
Meat Packing Houses.....	12
Meat Depots.....	3
Poultry Slaughterhouses.....	3
Rendering Plants.....	23
<b>TOTAL OFFICIAL ESTABLISHMENT INSPECTIONS.....</b>	<b>167</b>

LABELS AND SKETCHES

<u>ITEM</u>	<u>NUMBER</u>
Labels reviewed which were in use prior to July 1, 1965.....	43
Labels temporarily approved.....	8
Labels approved.....	24
Sketches approved.....	124
<b>TOTAL.....</b>	<b>199</b>

ESTABLISHMENTS UNDER STATE MEAT INSPECTION

ESTABLISHMENT NAME	LOCATION	ESTABLISHMENT NO.
--------------------	----------	-------------------

Slaughterhouses

*Barsotti Bros. Meat Packing Plant, Inc..	Great Falls.....	8
Blastoch Meats, Inc.....	Butte.....	13
*Daily, John R., Inc.....	Missoula.....	2
*Havre Abattoir.....	Havre.....	12
*Kalispell Meat Company.....	Kalispell.....	9
Mickey's Packing Plant.....	Great Falls.....	18
Miles City Packing Company.....	Miles City.....	26
*Montana Meat Company of Helena.....	Helena.....	5
Montana State Prison.....	Deer Lodge.....	4
Montana State University.....	Bozeman.....	23
*New Butte Butchering Company.....	Butte.....	19
Quick Freeze Packing Company.....	Livingston.....	10
*Rahr Meat Service.....	Glendive.....	6
Roberts Packing Plant.....	Dillon.....	16
*Rocky Mountain Packing Company, Inc.....	Havre.....	21
Schramm Packing Company.....	Missoula.....	3
*Timberland Packing Company.....	Lewistown.....	22
Triangle Packing Company.....	Choteau.....	27
Vandevanter Meats.....	Columbia Falls.....	7
Vollmer & Sons, Inc.....	Bozeman.....	14
*Also does meat processing.		

Meat Packing Houses

Ben's H & H Market.....	Missoula.....	29
Central Meat Market.....	Lewistown.....	32
Great Falls Meat Company.....	Great Falls.....	36
Hickory Kitchen.....	Great Falls.....	31
Montana Sausage Company.....	Great Falls.....	30
M&P Meat Company, Inc.....	Great Falls.....	34
Snowy Mountain Meat Company.....	Lewistown.....	33
Triplett Meats.....	Kalispell.....	35

ESTABLISHMENTS UNDER FEDERAL MEAT INSPECTION

ESTABLISHMENT NAME	LOCATION	ESTABLISHMENT NO.
--------------------	----------	-------------------

Slaughterhouses

Austin's Packing Company.....	Glasgow.....	317
Great Falls Meat Company.....	Great Falls.....	301
Midland Empire Packing Company, Inc.....	Billings.....	339
Needham Packing Corp. of Montana.....	Great Falls.....	857-G
Pierce Packing Company.....	Billings.....	691
Sigman Meat Company of Montana.....	Butte.....	901-A

ANIMALS SLAUGHTERED UNDER STATE AND FEDERAL MEAT INSPECTION  
AND  
ANIMALS SLAUGHTERED WITHOUT MEAT INSPECTION

SPECIE	STATE	FEDERAL	WITHOUT
Cattle.....	44,707.....	185,648.....	10,845
Calves.....	1,343.....	228.....	329
Sheep.....	4,478.....	35.....	487
Swine.....	55,605.....	257,442.....	11,753
TOTAL.....	106,133.....	443,353.....	23,414

WHOLE CARCASSES FOUND UNFIT FOR HUMAN CONSUMPTION  
UNDER STATE AND FEDERAL MEAT INSPECTION

SPECIE	STATE	FEDERAL	ESTIMATED WEIGHT
Cattle.....	139.....	593.....	402,600
Calves.....	22.....	-0-.....	4,400
Sheep.....	40.....	-0-.....	1,880
Swine.....	120.....	359.....	89,094
TOTAL.....	321.....	952.....	497,974

PARTS OF CARCASSES FOUND UNFIT FOR HUMAN CONSUMPTION  
UNDER STATE AND FEDERAL MEAT INSPECTION

SPECIE	STATE	FEDERAL	ESTIMATED WEIGHT
Cattle.....	1,595.....	17,678.....	38,546
Calves.....	38.....	1.....	78
Sheep.....	980.....	-0-.....	1,960
Swine.....	28,255.....	22,988.....	51,243
TOTAL.....	30,868.....	40,667.....	91,827

BEEF AND SWINE LIVERS FOUND UNFIT FOR HUMAN CONSUMPTION  
UNDER STATE AND FEDERAL MEAT INSPECTION

LIVERS	STATE	FEDERAL	ESTIMATED WEIGHT
Beef.....	13,367.....	61,930.....	752,970
Swine.....	22,500.....	53,578.....	228,234
TOTAL.....	35,867.....	115,508.....	981,204



DIAGNOSES OF WHOLE CARCASSES CONDEMNED AT SLAUGHTER  
UNDER STATE MEAT INSPECTION

DIAGNOSIS	CATTLE	CALVES	SHEEP	SWINE
Abscesses.....	6.....	0.....	1.....	15
Actinomycosis bacillosis.....	3.....	0.....	0.....	0
Anasarca.....	3.....	0.....	0.....	0
Arthritis-polyarthritis.....	0.....	1.....	0.....	7
Ascites.....	0.....	2.....	0.....	0
Bruises, injuries, ect.....	8.....	0.....	1.....	5
Cachexia.....	21.....	3.....	12.....	4
Caseous lymphadenitis.....	0.....	0.....	21.....	0
Contamination.....	0.....	0.....	0.....	1
<u>Cysticercus bovis</u> .....	2.....	0.....	0.....	0
Edema.....	4.....	0.....	0.....	0
Emaciation.....	0.....	0.....	5.....	0
Endocarditis.....	1.....	0.....	0.....	0
Enteritis.....	0.....	0.....	0.....	4
Eosinophilic myositis.....	1.....	0.....	0.....	0
Epithelioma.....	18.....	0.....	0.....	0
Hydronephrosis.....	0.....	0.....	0.....	1
Icterus.....	1.....	0.....	0.....	28
Immature.....	0.....	1.....	0.....	0
Leucocythaemia.....	0.....	0.....	0.....	2
Metastasis.....	1.....	0.....	0.....	0
Metritis.....	7.....	0.....	0.....	3
Moribund.....	0.....	2.....	0.....	4
Neoplasm.....	1.....	0.....	0.....	0
Nephritis.....	2.....	0.....	0.....	1
Pancreatitis (purulent).....	0.....	0.....	0.....	1
Pericarditis.....	9.....	0.....	0.....	1
Peritonitis.....	7.....	1.....	0.....	5
Pleuritis.....	1.....	0.....	0.....	1
Pneumonia.....	19.....	8.....	0.....	8
Pyelonephritis.....	2.....	0.....	0.....	0
Pyemia.....	4.....	0.....	0.....	3
Pyometa.....	1.....	0.....	0.....	0
Septicemia-toxemia.....	15.....	3.....	0.....	16
Sex odor.....	0.....	0.....	0.....	4
Subdermal gangrene.....	0.....	1.....	0.....	0
Tuberculosis.....	0.....	0.....	0.....	2
Uremia.....	1.....	0.....	0.....	0
Urinary calculi.....	1.....	0.....	0.....	0
Urinary odor.....	0.....	0.....	0.....	2
Miscellaneous diseases of the liver	0.....	0.....	0.....	2
<u>TOTAL</u> .....	<u>139.....</u>	<u>22.....</u>	<u>40.....</u>	<u>120</u>

**DIAGNOSES OF PARTS OF CARCASSES CONDEMNED AT SLAUGHTER  
UNDER STATE MEAT INSPECTION**

DIAGNOSIS	CATTLE	CALVES	SHEEP	SWINE
Abscesses.....	448.....	5.....	37.....	2,775
Actinomycosis bacillosis.....	383.....	0.....	0.....	2
Adhesions.....	0.....	0.....	4.....	151
Adhesions (pericardial).....	221.....	0.....	0.....	418
Arthritis.....	8.....	0.....	0.....	59
Atrophic rhinitis.....	0.....	0.....	0.....	2
Bruises, injuries, ect.....	410.....	10.....	5.....	344
Caseous lymphadenitis.....	0.....	0.....	9.....	0
Contamination.....	36.....	0.....	0.....	32
<u>Cysticercus tenuicollis</u> .....	0.....	0.....	51.....	25
Emphysema.....	2.....	0.....	0.....	0
Eosinophilic myositis.....	2.....	0.....	0.....	0
Epithelioma.....	62.....	0.....	0.....	0
Hydronephrosis.....	7.....	0.....	0.....	10
Lymphadenitis.....	1.....	0.....	0.....	0
Melanosis.....	1.....	0.....	0.....	1
Parasites.....	0.....	0.....	9.....	0
Neoplasm.....	4.....	0.....	0.....	0
Pneumonia.....	1.....	0.....	0.....	6
Sinusitis.....	1.....	0.....	0.....	0
Taeniasis.....	0.....	0.....	44.....	0
Tuberculosis.....	4.....	0.....	0.....	1,270
Unclean heads.....	0.....	0.....	0.....	657
Miscellaneous diseases of the liver.....	4.....	23.....	821.....	22,503
<b>TOTAL.....</b>	<b>1,595.....</b>	<b>38.....</b>	<b>980.....</b>	<b>28,255</b>

**DIAGNOSES OF BEEF LIVERS CONDEMNED AT SLAUGHTER  
UNDER STATE MEAT INSPECTION**

DIAGNOSIS	NUMBER CONDEMNED
Abscesses.....	9,496
Carotenosis.....	22
Cirrhosis.....	179
Distomiasis.....	2,685
Echinococcosis.....	18
Sawdust.....	385
Telangiectasis.....	205
Miscellaneous diseases.....	377
<b>TOTALS.....</b>	<b>13,367</b>

**POUNDS OF MEAT AND/OR MEAT BY-PRODUCTS PROCESSED  
UNDER STATE MEAT INSPECTION**

TYPE OF PROCESSING	POUNDS
<u>Placed in Cure</u>	
Beef.....	122,509
Pork.....	1,887,659
Other.....	14,204
<u>Smoked and/or Dried</u>	
Beef.....	77,070
Pork.....	1,713,264
<u>Cooked Meat</u>	
Beef.....	13,002
Pork.....	91,128
<u>Sausage Fresh Finished</u> .....	624,488
<u>Sausage Smoked or Cooked</u>	
Franks, Wieners.....	1,534,830
Other.....	453,228
<u>Loaf: Head Cheese, Chilli, Jellied Product</u> .....	397,059
<u>Steaks, Chops, Roasts</u> .....	651,740
<u>Sliced Product</u>	
Bacon.....	279,042
Other.....	10,105
<u>Hamburger</u> .....	390,699
<u>Miscellaneous Meat Product</u> .....	87,010
<u>Lard Rendered</u> .....	729,037
<u>Oleo Stock</u> .....	395
<u>Edible Tallow</u> .....	23,729
<u>Rendered Pork Fat</u>	
Rendered.....	16,290
Refined.....	800
<u>Compound Containing Animal Fat</u> .....	17,300
<u>TOTAL</u> .....	9,134,588

**REINSPECTED OR REJECTED  
MEAT, MEAT BY-PRODUCTS AND INGREDIENTS  
UNDER STATE MEAT INSPECTION**

ITEM	POUNDS
Reinspected Meat and/or Meat By-Product.....	1,493,318
Rejected Meat and/or Meat By-Product.....	4,967
Rejected Ingredients: Pickels, Peppers and Olives (Gallons).....	104
<u>TOTAL</u> .....	1,498,389

## PAGE

ADMINISTRATION DIVISION REPORT.....	1
Agricultural Research Service, Montana Branch.....	12
Anaplasmosis.....	36
'Anaplaz' Vaccine.....	36
Animal and Range Sciences Department, Montana State University.....	8,12
Animal Inspection Report, Official (Tabulation).....	44
Animals Slaughtered under State and Federal Meat Inspection and Animals Slaughtered without Meat inspection (Tabulation).....	57
Anthrax.....	3
Artificial Insemination.....	8,11,50
Artificial Insemination, Licenses Issued.....	8,11
Artificial Insemination, Permits Issued to Import Semen (Tabulation).....	50
'Asthma'.....	7
Autopsies Performed Report (Tabulation).....	34
Bacteria, Cause of Disease by (Tabulation).....	48
Bacterin, Trivalent <u>Vibrio fetus</u> .....	6
Bacteriology, Pathology, Parasitology and Virology Report (Tabulation).....	16-29
Beef and Swine Livers Found Unfit for Human Consumption under State and Federal Meat Inspection (Tabulation).....	57
Bluetongue.....	3,6
Board Members - See "Livestock Sanitary Board, Members of"	
Breeders, Out-of-State - See "Artificial Insemination, Permits Issued to Import Semen (Tabulation)"	
Brucellosis, Cattle.....	3,7,36
Brucellosis Eradication in Montana Counties, Progress of (Tabulation).....	37-38
Brucellosis-Free Swine Herds (Tabulation).....	42
Brucellosis-Infected Herds, Reduction of (Tabulation).....	37
Brucellosis, Swine.....	3,42



	PAGE
"Calf Scours", Report of Veterinary Research Laboratory on.....	8-9
Calves Officially Vaccinated with <u>Bruceella abortus</u> Vaccine (Tabulation).....	38
"Cancer Eye".....	7
Cattle Diseases.....	3,4,5,6,7,8,36,37,38,39,40,45-47
Chemical Report (Tabulation).....	32-33
Chickens - See "Poultry"	
City Health Departments.....	12
Colleges of Veterinary Medicine - See "Veterinary Medical Colleges"	
Cooperating Agencies, Departments and Associations (Tabulation).....	12
Cooperative Extension Service - See "Montana Cooperative Extension Service"	
County Health Departments.....	12
"Dairies, Milk Plants, Milk and Milk Products" Regulations, Revised.....	10
Deputy State Veterinarians.....	1,36
Diagnoses of Beef Livers Condemned at Slaughter under State Meat Inspection (Tabulation).....	59
Diagnoses of Parts of Carcasses Condemned at Slaughter under State Meat Inspection (Tabulation).....	59
Diagnoses of Whole Carcasses Condemned at Slaughter under State Meat Inspection (Tabulation).....	58
Diagnostic Laboratory Division (Comments by State Veterinarian).....	2-3
DIAGNOSTIC LABORATORY DIVISION REPORT.....	15
Diagnostic Laboratory Equipment, Recommendations regarding.....	2
Diagnostic Laboratory Personnel, Recommendations regarding.....	2
Disease Control Division (Comments by State Veterinarian).....	1,2,3
DISEASE CONTROL DIVISION REPORT.....	36
Disease Report, Montana Veterinarians' - See "Montana Veterinarians' Disease Report"	
Distribution and Causes of Animal Diseases, Percentage of - See "Etiological Agents Responsible for Diseases Reported by Montana Veterinarians"	

Distribution of Laboratory Tests Among Species of Animals Report (Tabulation).....	35
Divisions of Montana Livestock Sanitary Board - See "Livestock Sanitary Board, Divisions of"	
Dogs.....	45-47
Emergency Disease Outbreak.....	1,2,14
Encephalitis.....	3,4,6,40-41
Enzootic Bovine Abortion.....	6,40
Epididymitis.....	4,41
Epididymitis, Recommendation to Continue Observation and Study.....	4
Epididymitis, Regulation (New).....	4,10
Equipment, Diagnostic Laboratory - See "Diagnostic Laboratory, Recommendation Regarding"	
Equipment Tests, Milk Plant.....	52
Establishments under Federal Meat Inspection (Tabulation).....	56
Establishments under State Meat Inspection (Tabulation).....	56
Etiological Agents Responsible for Diseases Reported by Montana Veterinarians (Tabulation).....	48
Extension Service, Montana Cooperative - See "Montana Cooperative Extension Service"	
Financial Statement (Tabulation).....	14
Fish & Game Commission - See "Montana Fish & Game Commission"	
Fluorosis.....	4,39
Fluorosis, Recommendation Regarding Discharge of.....	4
Foot rot.....	41
Fort Dodge Laboratories - See "Anaplaz" Vaccine	
Garbage Feeding.....	11,42,51
Garbage Feeding Establishments, Licenses Issued.....	11,51
Governor, of Montana and Office of.....	5

Grade "A" Pasteurized Milk Ordinance, USPHS.....	7
Grant to Veterinary Research Laboratory.....	8-9, 14
Hatcherymen, Out-of-State - See "Out-of-State Hatcherymen Holding Permits to Import Baby Chicks and Hatching Eggs"	
History & Duties of Montana Livestock Sanitary Board - See "Livestock Sanitary Board, History & Duties of"	
Hog Cholera.....	3, 4, 5, 42, 51
Hog Cholera-Free State Status.....	4, 5, 42
Hog Cholera, Recommendation for Maintaining Hog Cholera-Free State Status....	4, 5
Horse Diseases.....	3, 4, 6, 40-41, 45-47
Horse Racing Commission - See "Montana Horse Racing Commission"	
Human Health.....	1, 2, 3, 5, 7, 8, 40, 41, 51, 52, 55
Imports into Montana (Tabulation).....	49
Import Regulation, New and Revised (Sheep).....	4
Import Regulation, Revised (Swine).....	10
Imports, Permits Issued.....	11, 50
Indemnity, Recommendation Regarding Hog Cholera.....	4, 5
Keds, Sheep - See "Lice, Sheep"	
"Labeling Meat-Products" Regulation, Revised.....	10
Labels and Sketches (Tabulation).....	2, 55
Letter of Transmittal, Montana Livestock Sanitary Board to Governor of Montana.....	i
Letter of Transmittal, State Veterinary Surgeon to Montana Livestock Sanitary Board.....	ii
Licenses and Permits Issued (Tabulation).....	11, 50
Lice, Sheep.....	6, 41
Livestock Commission, Montana - See "Montana Livestock Commission"	
Livestock Markets, List of (Tabulation).....	51
Livestock Markets, Official Animal Inspections Made at (Tabulation).....	51

## Livestock Sanitary Board:

Divisions of.....	iv
History & Duties of.....	v
Meetings Held.....	i,4
Members of.....	iii
Staff of.....	1,2,3
Market-Cattle-Testing Program.....	3,36
Markets, Public - See "Public Markets"	
Mastitis.....	7,52
Meat Depot Inspections.....	55
Meat Depots, Licenses Issued.....	11
Meat Inspection Division (Comments by State Veterinarian).....	1,2,3,7,8
MEAT INSPECTION DIVISION REPORT.....	55
Meat Packing House Inspections.....	55
Meat Packing Houses, Licenses Issued.....	11,56
Meat Packing Houses, List of (Tabulation).....	56
Meat Processing and Labeling Inaugurated and Progress Made.....	7
Meat Processing Establishments, List of (Tabulation).....	56
Meat-Product Labeling Regulation, Revised - See "Labeling Meat Products Regulation, Revised"	
Meat Slaughterhouses, List of - See "Slaughterhouses, List of"	
Milk, Cream and Cottage Cheese Bacteriology Report (Tabulation).....	31
Milk & Dairy Inspection Division (Comments by State Veterinarian).....	1,2,7
MILK & DAIRY INSPECTION DIVISION REPORT.....	52
Milk Plant Sanitation Compliance Ratings with Montana Livestock Sanitary Board Regulations (Tabulation).....	53
Milk Plants, Licenses Issued.....	11
Milk Regulation, Revised - See "Dairies, Milk Plants, Milk and Milk Products Regulation, Revised"	



	PAGE
Modified-Accredited Tuberculosis Areas.....	40
Modified-Certified Brucellosis Areas.....	37
Montana City and County Health Departments.....	12
Montana Cooperative Extension Service, Montana State University.....	5,12
Montana County Commissioners.....	5,12
Montana Fish & Game Commission.....	5,12
Montana Horse Racing Commission.....	2
Montana Independent Meat Packers Association.....	12
Montana Livestock Commission.....	5,12
Montana Livestock Sanitary Board - See "Livestock Sanitary Board"	
Montana Milk Distributors.....	12
Montana Milk Producers.....	12
Montana Poultrymen.....	12
Montana State Board of Health.....	5,12
Montana State University.....	8,12
Montana Stockgrowers Association.....	12
Montana Swine Growers Association.....	12
Montana Veterinarians' Disease Report (Tabulation).....	45-47
Montana Veterinary Medical Association.....	12
Montana Veterinary Research Laboratory - See "Veterinary Research Laboratory"	
Montana Woolgrowers Association.....	4,12
Morbidity Report - See "Montana Veterinarians' Disease Report"	
Mosquitoes.....	4,41
Mucosal-Virus Diarrhea.....	6
"Neonatal Enteritis in Calves", Veterinary Research Laboratory Progress Report.....	8-9
Newcastle Disease.....	3

Nutrition, Cause of Diseases by (Tabulation).....	48
Official Animal Inspections Report (Tabulation).....	44
Official Establishment Inspections (Tabulation).....	55
Official Inspections and Official Tests, Summary of (Tabulation).....	13
Official Inspections and Tests of Milk, Milk Products, Dairies and Milk Plants (Tabulation).....	52
Official Inspections Made at Montana Livestock Markets (Tabulation).....	51
Official Orders Issued.....	10
Official Regulations, Revised and New.....	4,7,10
Official Test or Examination by Diagnostic Laboratory, Summary of (Tabulation).....	15
Orders Issued, Official - See "Official Orders Issued"	
Out-of-State Breeders Holding Permits to Import Semen for Artificial Insemination (Tabulation).....	50
Out-of-State Hatcherymen Holding Permits to Import Baby Chicks and Hatching Eggs.....	50
Packing Houses, List of - See "Meat Packing Houses, List of"	
Parasites, Cause of Diseases by (Tabulation).....	48
Parasites, Internal and External.....	6
Parts of Carcasses Found Unfit for Human Consumption under State and Federal Meat Inspection (Tabulation).....	57
Pediculosis - See "Lice, Sheep"	
Percentage Distribution on Causes of Animal Diseases - See "Etiological Agents Responsible for Diseases Reported by Montana Veterinarians"	
Per Diem Pay, Regulation Revised.....	10
Permits Issued to Import Baby Chicks and Hatching Eggs.....	11,50
Permits Issued to Import Semen for Artificial Insemination (Tabulation)....	11,50
Personnel, Livestock Sanitary Board - See "Livestock Sanitary Board, Staff of"	
Pesticides, Detection of.....	3,7
"Pink Eye".....	7

## PAGE

Poisons, Cause of Diseases by.....	47
Poisons, Recommendation Regarding Discharge of Flucrosis.....	4
Poultry Diseases.....	3,5,6,41,43,45-47
Poultry Permits Issued to Import Baby Chicks and Hatching Eggs.....	11,50
Poultry Slaughterhouse Inspections (Tabulation).....	55
Poultry Slaughterhouses, Licenses Issued.....	11
Pounds of Meat and/or Meat By-Products Processed under State Meat Inspection (Tabulation).....	60
Processing Establishments - See "Meat Processing Establishments, List of"	
Producer Dairies, Licenses Issued.....	11
Protozoa, Cause of Diseases by (Tabulation).....	48
Psoroptic Scabies - See "Scabies"	
Public Markets.....	4
Pullorum - See "Salmonella"	
Purpose and Objectives, Summary of (Administration Comments).....	1
Quarantines, Brucellosis.....	37
Quarantines, Lice.....	41
Quarantines, Rabies.....	10
Quarantines, Tuberculosis.....	39
Rabies.....	5,6,10,43
Rabies, Positive Cases (Tabulation).....	43
Ram Epididymitis - See "Epididymitis"	
Ray Foundation.....	6,12
Ray Foundation, Field Test of Trivalent <u>Vibrio fetus</u> Bacterin by.....	6
Regulations, Official Revised and New - See "Official Regulations, Revised and New"	
Reinspected or Rejected Meat, Meat By-Products and Ingredients under State Meat Inspection (Tabulation).....	60

Rendering Plant Inspections.....	55
Rendering Plants, Licenses Issued.....	11
REO - See "Epididymitis"	
Retail Raw Dairies, Licenses Issued.....	11
Retail Raw Dairies Sanitation Compliance Ratings with Montana Livestock Sanitary Board Regulations (Tabulation).....	54
Rhinotracheitis.....	6,39
Rocky Mountain Laboratory.....	12,40
Round Worms, Sheep.....	6
Salaries, Professional - See "Livestock Sanitary Board, Staff of"	
<u>Salmonella</u> , <u>pullorum</u> , <u>newport</u> and <u>san diego</u> .....	3,43
Scabies.....	3,5
Scientific Personnel - See "Livestock Sanitary Board, Staff of"	
Serology Report (Tabulation).....	30
Sheep Diseases.....	3,4,6,41,45-47
Shipping Fever.....	6,39
Skunk-Suppression Rabies-Eradication Program - See "Rabies"	
Slaughterhouse Inspections.....	55
Slaughterhouses, Licenses Issued.....	11
Slaughterhouses, List of (Tabulation).....	56
Snakes.....	41
Staff, Montana Livestock Sanitary Board - See "Livestock Sanitary Board, Staff of"	
State Board of Health - See "Montana State Board of Health"	
Swine Diseases.....	3,4,5,6,42,45-47
Tapeworms, Sheep.....	6
Ticks.....	36
Transmissible Gastroenteritis (TGE).....	6



## Tuberculosis:

Cattle.....	3,6,7,39-40,52
Poultry.....	3,6,40
Swine.....	3,6,42
Tuberculosis, Recommendation for Regulation on Poultry.....	6
U. S. Bureau of Sport Fisheries and Wildlife.....	5,12
U. S. Department of Agriculture.....	4,12,51
U. S. Public Health Service.....	7,12
Vaccination, <u>Brucella abortus</u> .....	38
Vaccination, Ram Epididymitis - See "Epididymitis"	
Vaccines.....	36,42
Veterinary Medical Colleges.....	1,36
Veterinary Medical Scientists, Shortage of.....	1,2
Veterinary Research Laboratory, Montana State University.....	4,6,12
Veterinary Research Laboratory, Grant to the.....	8-9,14
Vibriosis.....	6,40
Virus Abortion - See "Enzootic Bovine Abortion"	
Virus-Caused Diseases.....	2,6,39,40,41,48
Virus-Caused Diseases, Recommendation Regarding Control of.....	2,6
Viruses, Cause of Diseases by.....	47
Virus Diarrhea - See "Mucosal-Virus Diarrhea"	
Vulvovaginitis.....	6,39
"Water Belly".....	7
Western Equine Encephalitis - See "Encephalitis"	
Whole Carcasses Found Unfit for Human Consumption under State and Federal Meat Inspection (Tabulation).....	57
Wild Animal Diseases.....	5,36,43
Wisconsin Mastitis Tests.....	7

## PAGE

Work Performed, Diagnostic Laboratory Division (Tabulation).....	15
Work Performed, Meat Inspection Division (Narrative and Tabulation).....	55
Work Performed, Milk & Dairy Inspection Division (Narrative and Tabulation)...	52

ADMINISTRATION DIVISION

Cooperating Agencies, Departments and Associations.....	12
Financial Statement.....	14
Licenses and Permits Issued.....	11
Official Inspections and Official Tests.....	13

DIAGNOSTIC LABORATORY DIVISION

Autopsies Performed.....	34
Bacteriology, Pathology, Parasitology and Virology.....	16-29
Chemical.....	32-33
Distribution of Laboratory Tests Among Species of Animals.....	35
Milk, Cream and Cottage Cheese Bacteriology.....	31
Serology.....	30
Work Performed, Summary of.....	15

DISEASE CONTROL DIVISION

Brucellosis-Free Swine Herds.....	42
Calves Officially Vaccinated with <u>Brucella abortus</u> Vaccine.....	38
Etiological Agents Responsible for Diseases Reported by Montana Veterinarians.....	48
Imports into Montana.....	40
Montana Veterinarians' Disease.....	45-47
Official Animal Inspections.....	44
Official Inspections Made at Montana Livestock Markets.....	51
Permits to Import Semen for Artificial Insemination.....	50
Positive Rabies.....	43
Progress of Bovine Brucellosis Eradication in Montana Counties.....	37-38

Reduction of Brucellosis-Infected Herds.....	37
----------------------------------------------	----

MILK & DAIRY INSPECTION DIVISION

Milk Plant Sanitation Compliance Ratings with Montana Livestock Sanitary Board Regulations.....	53
Official Inspections and Tests of Milk, Milk Products, Dairies and Milk Plants.....	52
Retail Raw Dairies Sanitation Compliance Ratings with Montana Livestock Sanitary Board Regulations.....	54

MEAT INSPECTION DIVISION

Animals Slaughtered under State and Federal Meat Inspection and Animals Slaughtered Without Meat Inspection.....	57
Beef and Swine Livers Found Unfit for Human Consumption under State and Federal Meat Inspection.....	57
Diagnoses of Beef Livers Condemned at Slaughter under State Meat Inspection.....	59
Diagnoses of Parts of Carcasses Condemned at Slaughter under State Meat Inspection.....	59
Diagnoses of Whole Carcasses Condemned at Slaughter under State Meat Inspection.....	58
Establishments under Federal Meat Inspection.....	56
Establishments under State Meat Inspection.....	56
Labels and Sketches.....	55
Official Establishment Inspections.....	55
Parts of Carcasses Found Unfit for Human Consumption under State and Federal Meat Inspection.....	57
Pounds of Meat and/or Meat By-Products Processed under State Meat Inspection.....	60
Reinspected or Rejected Meat, Meat By-Products and Ingredients under State Meat Inspection.....	60
Whole Carcasses Found Unfit for Human Consumption under State and Federal Meat Inspection.....	57





